



# CATALOG 2020

PART 2

euromex

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MICROSCOPES FOR EDUCATION, LIFE SCIENCE AND INDUSTRY

PART 1 MICROSCOPES FOR EDUCATION

PART 2 MICROSCOPES FOR LIFE SCIENCE

PART 3 MICROSCOPES FOR INDUSTRY



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## euromex MICROSCOPE COLLECTION 2020



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## EDUCATION | BIOLOGICAL MICROSCOPES

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

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## EDUCATION | STEREO MICROSCOPES

EduBlue • StereoBlue  
NexiusZoom • AP series

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## EDUCATION | DIGITAL SOLUTIONS

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

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## LIFE SCIENCE | BIOLOGICAL MICROSCOPES

iScope • bScope • Delphi-X Observer • Oxion  
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## LIFE SCIENCE | FLUORESCENCE MICROSCOPES

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

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

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## LIFE SCIENCE | DIGITAL SOLUTIONS

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

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## INDUSTRY | STEREO MICROSCOPES

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

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## INDUSTRY | MATERIALS SCIENCE MICROSCOPES

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

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## INDUSTRY | DIGITAL SOLUTIONS

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HD cameras • Cooled cameras • Tablet cameras • Software • Adapters

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## ACCESSORIES | FOR MICROSCOPY

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

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## OTHER OPTICAL PRODUCTS

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

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

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

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

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, life science and industry can simplify your selection

**SEE PAGE 398**

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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# life science

## biological microscopes



## biological microscopes

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



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# LIFE SCIENCE MICROSCOPES

iscope®

NeoLED™  
euromex optical technology

FEATURED

## 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 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



• iScope® tilting head

## 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 non-infinity 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)

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

### 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 beam splitter (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 beam splitter and one ± 5 diopter adjustment on the Ø 23.2 mm left tube. A unique rotating

### FACE-TO-FACE DUAL HEAD SYSTEM

The iScope® models now can also be equipped with a face-to-face trinocular head for two users allowing simultaneous observation. Supplied with 30° inclined tubes and plan or E-plan 4x, 10x, S40, S100x oil immersion infinity corrected IOS objectives. The central attachment is equipped with a joystick to move a green and red laser pointer across the entire field of views of the two heads. The trinocular head is supplied with extended wide field EWF 10x/22 mm eyepieces and the

## iScope®

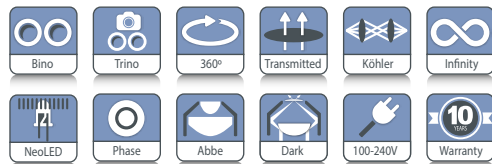
The iScope® is available in various configurations suitable for Life and Biomedical Sciences, high schools, universities but also for routine medical applications

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



• IS.1153-PLi

IS.1152-PLi  
407 (h) x 210 (w) x 255 mm (d) | 9.0 kg





second binocular head is supplied with extended wide field EWF 10x/20 mm eyepieces. (Order reference: IS.1154-PLi)

## 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

## OBJECTIVES

E-plan EPL	4x/0.10	10x/0.25	20x/0.40*	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*	S40x/0.65	S60x/0.85*
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

\* 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

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)

## 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

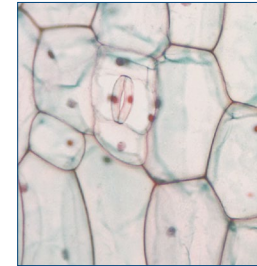
Coaxial coarse and fine adjustments, 200 graduations, 1 µm per graduation, 200 µm per rotation, total travel range is approximately 24 mm. Supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse adjustments are equipped with friction control

## ILLUMINATION

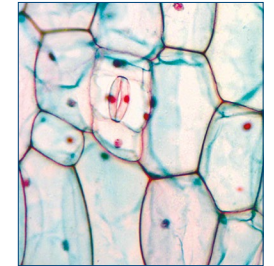
3 W adjustable Köhler NeoLED™ diascope illumination with internal 100-240 V power supply. The innovative NeoLED™ design offers larger apertures, allowing the optical system of the iScope® microscope to produce images at higher resolutions, very close to the theoretical diffraction limit of the optics. Other benefits of the NeoLED™ is the low energy consumption, no heating and a long operating life span. 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 automatically switches off shortly after microscopists step away from their position



● Normal LED



● NeoLED™

## 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.1152-EPL



## ISCOPE® FOR LIFE SCIENCE (NON-INFINITY 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	•			•*		•		•	•	•
IS.1153-PLi		•		•*		•		•	•	•
IS.1152-PLPHi	•		•	•*		•		•	•	•
IS.1153-PLPHi		•	•	•*		•		•	•	•

\* Two tubes with diopter adjustments

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

MODELS	Total users	Binocular EWF 10x/20 mm	Trinocular EWF 10x/20 mm	E-plan IOS 4x/10x/40x/100x objectives	Plan IOS 4x/10x/40x/100x objectives	Mechanical rackless stage	iCare sensor	Köhler LED
IS.1154-PLi	2	2x			•	•	•	•
IS.1154-EPLi	2	2x		•		•	•	•
IS.1154-PLi/T	2	1x	1x		•	•	•	•
IS.1154-EPLi/T	2	1x	1x	•		•	•	•

## ISCOPE® FOR LIFE SCIENCE (INFINITY - MULTIHEAD SYSTEMS)

MODELS	Total users	Binocular	Trinocular	EWF 10x22 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	•	•	•	•	•	•



● IS.1156-PLi-9

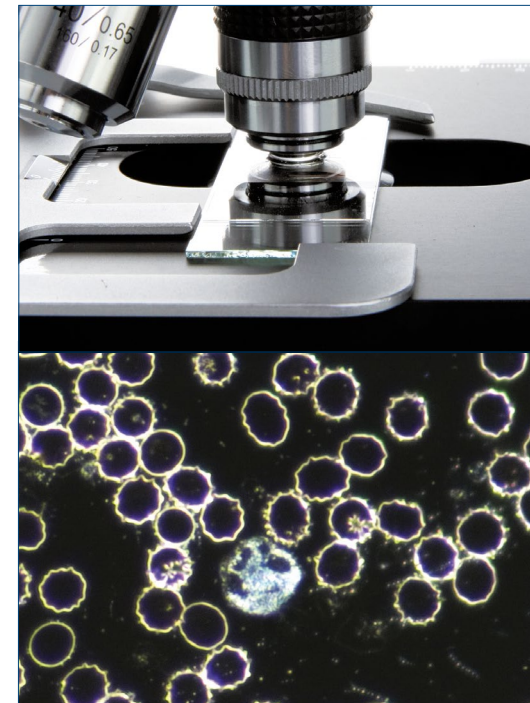
## ISCOPE® FOR LIFE SCIENCE (INFINITY - ERGONOMIC TILTING HEAD)

MODELS	Binocular	Photo port	Phase contrast	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 (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 used in particular for unstained samples. The produced image 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 especially 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

## EYEPIECES (23.2 MM)

- IS.6010** EWF 10x/20 mm eyepiece (Ø 23.2 mm tube)
- IS.6010-P** EWF 10x/20 mm eyepiece with pointer (Ø 23.2 mm tube)
- IS.6010-C** EWF 10x/20 mm eyepiece with crosshairs (Ø 23.2 mm tube)
- IS.6010-CM** EWF 10x/20 mm eyepiece with 10/100 micrometer and cross (Ø 23.2 mm tube)
- IS.6015** WF 15x/16 mm eyepiece (Ø 23.2 mm tube)
- IS.6020** WF 20x/12 mm eyepiece (Ø 23.2 mm tube)
- IS.6099** Pair of eyecups, Ø 23.2 mm tube

## EYEPIECES (30 MM)

- IS.6210** EWF 10x/22 mm eyepiece (Ø 30mm tube)
- IS.6210-C** EWF 10x/22 mm eyepiece with crosshairs (Ø 30 mm tube)
- IS.6210-P** EWF 10x/22 mm eyepiece with pointer (Ø 30 mm tube)
- IS.6210-CM** EWF 10x/22 mm eyepiece with 10/100 micrometer and crosshairs (Ø 30 mm tube)
- IS.6212** WF 12.5x/17 mm eyepiece (Ø 30 mm tube)
- IS.6212-W** WF 12.5x/17 mm eyepiece with Walton Beckett reticle (Ø 30 mm tube)
- IS.6215** WF 15x/16 mm eyepiece (Ø 30 mm tube)
- IS.6220** WF 20x/12 mm eyepiece (Ø 30 mm tube)
- IS.6299** Pair of eyecups infinity models (Ø 30 mm tube)

## OBJECTIVES

- 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 infinity corrected objective. WD 15.4 mm
- IS.8810** E-plan EPLi 10x/0.25 IOS infinity corrected objective. WD 5.8 mm
- IS.8840** E-plan EPLi S40x/0.65 IOS infinity corrected objective. WD 0.43 mm
- IS.8800** E-plan EPLi S100x/1.25 IOS infinity corrected objective. WD 0.13 mm
  
- IS.7202** Plan PLi 2x/0.05 IOS infinity corrected objective, WD 18.3 mm. Best to be used together with swing-out condenser
- IS.7204** Plan PLi 4x/0.10 IOS infinity corrected objective. WD 15.4 mm
- IS.7210** Plan PLi 10x/0.25 IOS infinity corrected objective. WD 10 mm
- IS.7220** Plan PLi 20x/0.40 IOS infinity corrected objective. WD 5.1 mm
- IS.7240** Plan PLi S40x/0.65 IOS infinity corrected objective. WD 0.54 mm
- IS.7260** Plan PLi S60x/0.85 IOS infinity corrected objective. WD 0.14 mm
- IS.7200** Plan PLi S100x/1.25 IOS infinity corrected objective. WD 0.13 mm
- IS.7200-I** Plan Super Contrast PLi S100x/1.25 IOS infinity corrected objective with built-in iris diaphragm. WD 0.13 mm
  
- IS.7404** Plan Fluarex PLFi 4x/0.13 IOS infinity corrected objective. 0.17 mm cover glass correction. WD 16.3 mm
- IS.7410** Plan Fluarex PLFi 10x/0.30 IOS infinity corrected objective. 0.17 mm cover glass correction. WD 12.4 mm
- IS.7420** Plan Fluarex PLFi 20x/0.50 IOS infinity corrected objective. 0.17 mm cover glass correction. WD 1.5 mm

- IS.7440** Plan Fluarex PLFi S40x/0.75 IOS infinity corrected objective. 0.17 mm cover glass correction. WD 0.35 mm
- IS.7400** Plan Fluarex PLFi S100x/1,30 IOS infinity corrected objective. 0.17 mm cover glass correction. 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

## CONDENSERS

- 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

## PHASE CONTRAST ATTACHMENTS

- 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, Ø 30 mm tube
- IS.9149** Alignment telescope for phase contrast, Ø 23.2mm tube
- 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

## MISCELLANEOUS

- 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.9880** Köhler attachment
- IS.4300** Aluminum transport case for iScope®
- 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

## POLARIZATION ATTACHMENTS

- IS.9600** Polarization filter 45 mm for lamphouse
- IS.9601** Polarization set: simple rotating polarizer for lamphouse and fixed polarizer mounted under head
- IS.9626** Polarization filter for mounting under the head

## FILTERS

- [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

## CAMERA ACCESSORIES

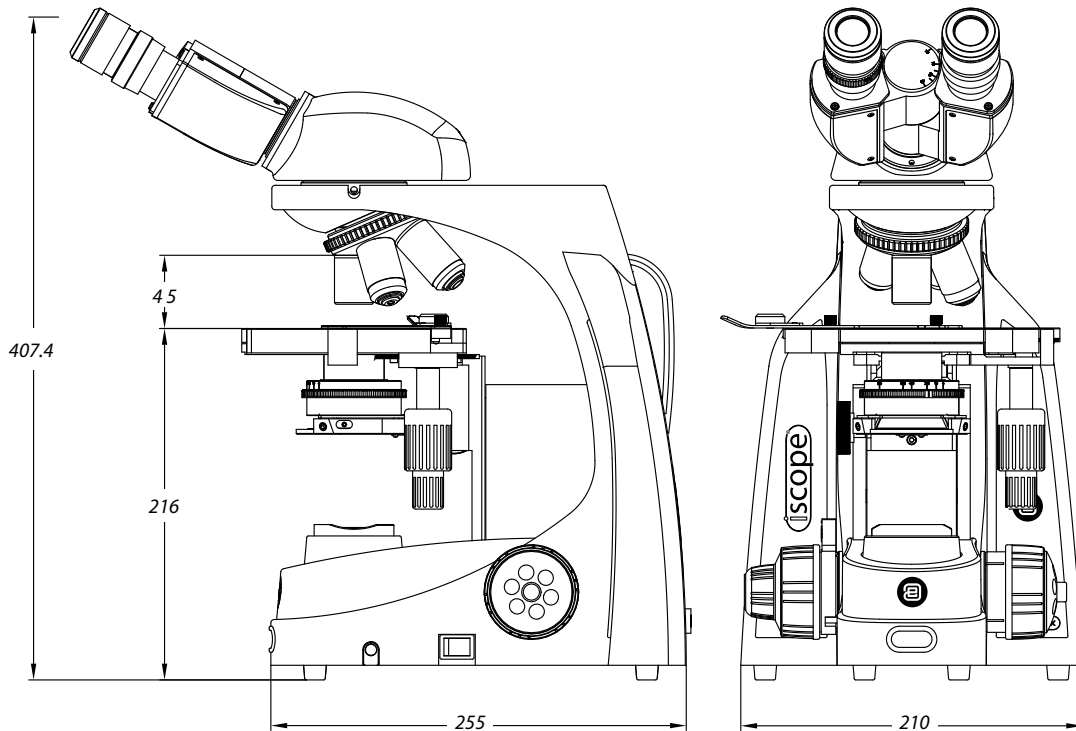
- IS.9800** Single photo tube attachment with one 23.2 mm tube for ergonomic tilting head of iScope® infinity systems
- AE.5130** Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D SLR digital camera
- AE.5040** T2 adapter for Canon EOS SLR digital camera

## DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack
- PB.5157-W** Microscope slides 76 x 26 mm, ground edges and frosted side white color, 50 pieces per pack
- PB.5157-B** Microscope slides 76 x 26 mm, ground edges and frosted side blue color, 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** Isopropyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox

WD = working distance



● IS.1154-PLi



● IS.1158-PLi, with optional IS.9503 Ceramic stage

● IS.1153-EPL-DFi



# BIOLOGICAL MICROSCOPES

bscope®

FEATURED

LIFE SCIENCE  
BIOLOGICAL MICROSCOPES

LIFE SCIENCE  
BIOLOGICAL MICROSCOPES

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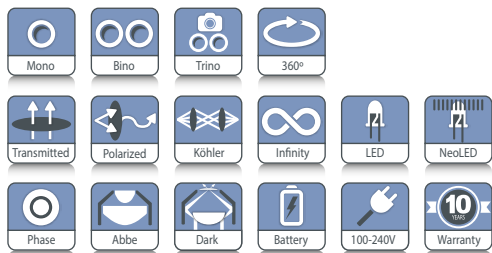
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## bScope®

### 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 eye tubes and low stage controls minimize fatigue during long working sessions and thus provide more comfort for microscopists. The robust, compact size of the bScope® and the Cable Storage System allow more working space, safer operation and enable easy storage



● BS.1153-EPLi

**MONOCULAR:** BS.1151-EPL / BS.1151-PL  
385 (h) x 235 (w) x 195 (d) | 6.3 kg  
**BINOCULAR:** BS.1152-EPL / BS.1152-EPLi / BS.1152-PLi  
409 (h) x 195 (w) x 235 mm (d) | 6.5 kg  
**TRINOCULAR:** BS.1153-EPL / BS.1153-EPLi / BS.1153-PLi  
459 (h) x 195 (w) x 235 mm (d) | 6.6 kg



● BS.1152-PLi

● BS.1151-EPL

## SPECIFICATIONS

### EYEPIECE(S)

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

### HEAD

The bScope® is available with a monocular head (45° inclined Ø 23.2 mm tube) or with binocular or trinocular heads equipped with a Siedentopf type head, 360° rotatable and equipped with 30° inclined Ø 23.2 mm tubes. Binocular and trinocular models have a diopter ± 5 adjustment on the 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. Models with an integrated USB-2.0 camera are supplied with a 5.0 MP 1/2.5" CMOS sensor with a resolution of 2592 x 1944 pixels (see chapter 7)

## HIGHLIGHTS

- Versatile and evolutive microscopes
- Monocular, binocular and trinocular models
- HWF 10x/20 mm eyepieces
- Reversed ball-bearing quadruple or quintuple nosepiece with slot for polarization filter
- E-plan, 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

### 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, 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

## POLARIZATION

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

## 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 life span



*Swing-out  
Abbe condenser  
0.9/1.25 NA*



*Zernike phase  
contrast condenser  
with filter holder*



*Ergonomic carrying  
grip for easy  
transportation*

## 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 \***

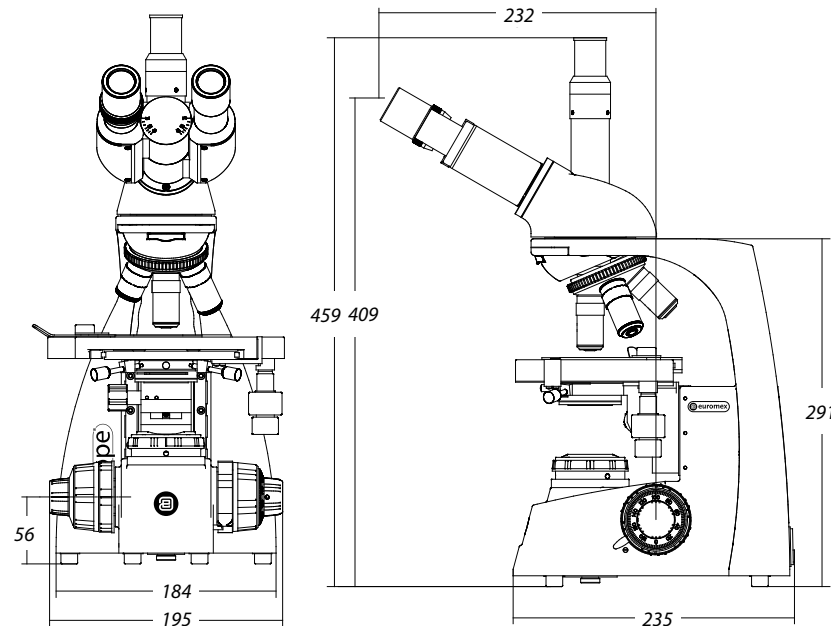
MODELS	Mono	Bino	Trino	HWF 10x/20 mm eyepieces	Quadruple nosepiece plan 4/10/S40/S100x	Quadruple nosepiece E-plan 4/10/S40/S100x	Quintuple nosepiece E-plan IOS 4/10/S40/S100x	Quintuple nosepiece plan IOS 4/10/S40/S100x	Köhler NeoLED™	Neo- LED™	2-position swiveling ergo head
BS.1151-EPL	.			.							
BS.1152-EPL		.		.						.	
BS.1153-EPL			.	.						.	
BS.1152-EPLi		.		.			.		.		.
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BS.1153-PLi			.	.				.	.		.

**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
BS.1152-EPLPH	.		.	.				.	
BS.1153-EPLPH		.	.	.				.	
BS.1152-EPLPHi	.		.	.	.		.	.	.
BS.1153-EPLPHi		.	.	.	.		.	.	.
BS.1152-PLPHi	.		.	.	.	.	.	.	.
BS.1153-PLPHi		.	.	.	.	.	.	.	.

\*All models can be supplied with three rechargeable AA batteries

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

**ACCESSORIES AND SPARE PARTS****EYEPIECES**

<b>BS.6010</b>	HWF 10x/20 mm eyepiece, Ø 23.2 mm tube	<b>BS.8204</b>	E-plan EPLi 4x/0.10 IOS infinity corrected objective. WD 18.9 mm
<b>BS.6010-P</b>	HWF 10x/20 mm with pointer, Ø 23.2 mm tube	<b>BS.8210</b>	E-plan EPLi 10x/0.25 IOS infinity corrected objective. WD 5.95 mm
<b>BS.6010-C</b>	HWF 10x/20 mm eyepiece with crosshairs, Ø 23.2 mm tube	<b>BS.8220</b>	E-plan EPLi 20x/0.40 IOS infinity corrected objective. WD 2.61 mm
<b>BS.6010-CM</b>	HWF 10x/20 mm eyepiece, Ø 23.2 mm tube with 10/100 micrometer and crosshairs	<b>BS.8240</b>	E-plan EPLi S40x/0.65 IOS infinity corrected objective. WD 0.78 mm
<b>BS.6012</b>	WF 12.5x/14 mm eyepiece, Ø 23.2 mm tube	<b>BS.8200</b>	E-plan EPLi S100x/1.25 IOS infinity corrected objective. WD 0.36 mm
<b>BS.6015</b>	WF 15x/11 mm eyepiece, Ø 23.2 mm tube		
<b>BS.6020</b>	WF 20x/11 mm eyepiece, Ø 23.2 mm tube		
<b>BS.6099</b>	Pair of eyecups		

**OBJECTIVES**

<b>BS.7104</b>	E-plan EPL 4x/0.10 objective. WD 37.0 mm	<b>BS.8404</b>	Plan PLi 4x/0.10 IOS infinity corrected objective. WD 21.0 mm
<b>BS.7110</b>	E-plan EPL 10x/0.25 objective. WD 6.61 mm	<b>BS.8410</b>	Plan PLi 10x/0.25 IOS infinity corrected objective. WD 5.0 mm
<b>BS.7120</b>	E-plan EPL 20x/0.40 objective. WD 1.85 mm	<b>BS.8420</b>	Plan PLi 20x/0.40 IOS infinity corrected objective. WD 8.8 mm
<b>BS.7140</b>	E-plan EPL S40x/0.65 objective. WD 0.64 mm	<b>BS.8440</b>	Plan PLi S40x/0.65 IOS infinity corrected objective. WD 0.66 mm
<b>BS.7160</b>	E-plan EPL S60x/0.85 objective. WD 0.20 mm	<b>BS.8400</b>	Plan PLi S100x/1.25 IOS infinity corrected objective. WD 0.36 mm
<b>BS.7100</b>	E-plan EPL S100x/1.25 objective. WD 0.19 mm		
<b>BS.7204</b>	Plan PL 4x/0.10 objective. WD 17.9 mm	<b>BS.8510</b>	E-plan phase EPLPHi 10x/0.25 IOS infinity corrected objective. WD 5.95 mm
<b>BS.7210</b>	Plan PL 10x/0.25 objective. WD 8,8 mm	<b>BS.8520</b>	E-plan phase EPLPHi 20x/0.40 IOS infinity corrected objective. WD 2.61 mm
<b>BS.7220</b>	Plan PL 20x/0.40 objective. WD 8,6 mm	<b>BS.8540</b>	E-plan phase EPLPHi S40x/0.65 IOS infinity corrected objective. WD 0.76 mm
<b>BS.7240</b>	Plan PL S40x/0.65 objective. WD 0.56 mm	<b>BS.8500</b>	E-plan phase EPLPHi S IOS infinity corrected objective. WD 0.36 mm
<b>BS.7260</b>	Plan PL S60x/0.85 objective. WD 0.25 mm		
<b>BS.7200</b>	Plan PL S100x/1.25 oil immersion objective. WD 0.33 mm		
<b>BS.7510</b>	E-plan phase EPLPH 10x/0.25 objective. WD 5.95 mm	<b>BS.8710</b>	Plan phase PLPHi 10x/0.25 IOS infinity corrected objective. WD 5.00 mm
<b>BS.7520</b>	E-plan phase EPLPH 20x/0.40 objective. WD 2.61 mm	<b>BS.8720</b>	Plan phase PLPHi 20x/0.40 IOS infinity corrected objective. WD 8.80 mm
<b>BS.7540</b>	E-plan phase EPLPH S40x/0.65 objective. WD 0.66 mm	<b>BS.8740</b>	Plan phase PLPHi S40x/0.65 IOS infinity corrected objective. WD 0.66 mm
<b>BS.7500</b>	E-plan phase EPLPH S100x/1.25 objective. WD 0.36 mm	<b>BS.8700</b>	Plan phase PLPHi S100x/1.25 IOS infinity corrected objective. WD 0.36 mm

WD = working distance

## CONDENSERS

- BS.9102** Abbe condenser 1,25 NA with slot for darkfield and phase contrast sliders
- BS.9170** Darkfield stop for BS.9102 condenser
- BS.9105** Swing-out Abbe condenser 0.9/1.25 NA

## PHASE CONTRAST ATTACHMENTS

- 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
- 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.9148** Alignment telescope for bScope® IOS version with Ø 30 mm tubes
- BS.9149** Alignment telescope for bScope® non IOS version with Ø 23.2 mm tubes
- 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

## POLARIZATION ATTACHMENTS

- BS.9660** Polarization kit: analyzer under head and polarizer on lamphouse
- BS.9647** Polarization polarizer Ø 16 mm for slider under bScope® head
- BS.9651** Polarization attachment for lamphouse of bScope® with 360° scale

## MISCELLANEOUS

- BS.9880** Köhler attachment
- BS.9900** Aluminum transport case
- BS.9993** NeoLED™ replacement unit
- AE.1370** Set of rechargeable batteries, three pieces

## CAMERA ACCESSORIES

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

## DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack
- PB.5157-W** Microscope slides 76 x 26 mm, ground edges and frosted side white color, 50 pieces per pack
- PB.5157-B** Microscope slides 76 x 26 mm, ground edges and frosted side blue color, 50 pieces per pack
- 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
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox



● BS.1153-PLPHi



# BIOLOGICAL MICROSCOPES

Delphi-X  
observer

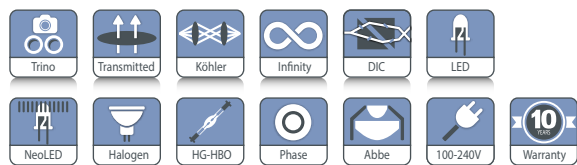
FEATURED

## 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 field of view and high numerical aperture of the plan 60 mm parfocal EIS objectives enable perfect observations, color rendering and high resolving power. This is the perfect microscope for anatomo-pathologists



● DX.2153-APLi



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

## HIGHLIGHTS

- Trinocular model
- Sextuple reversed nosepiece with slot for DIC
- Super wide field SWF 10x/25mm eyepieces, Ø 30 mm tubes
- Enhanced infinity corrected EIS optical system
- Ergonomic tilting head
- 60 mm parfocal plan EIS objectives
- 60 mm parfocal plan semi-apochromatic EIS objectives
- M25 objective thread mounting
- 3 W NeoLED™ illumination
- 100 W halogen illumination
- Face-to-face dual head system
- Multihead systems
- Brightfield, darkfield, phase contrast
- Differential Interference Contrast (DIC)

## 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, standard with a 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



DX.1158-PLi ●

### FACE-TO-FACE DUAL HEAD SYSTEM

The Delphi-X Observer™ can be supplied with two binocular 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 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 M25 objectives mounting threads

### MOTORIZED MODEL

The Delphi-X Observer™ can be supplied with a motorized revolving sextuple reversed nosepiece together with a flip-down condenser. A precise step-motor allows the user to switch from objective by a simple push on a button. Another button allows quick switching between two preselected objectives. The electronics memorize automatically the light intensity levels for each objective after switching. The electronics also automatically flip out the front lens of the flip-down condenser when the 4x objective is used



● Motorized nosepiece

### OBJECTIVES

Plan (PLi)	2x/0.06*	4x/0.10	10x/0.25	20x/0.40	S40x/0.65	S50x/ 0.95 oil*	S60x/ 0.80*	S100x/1.25 oil	S100x/ 1.25 oil iris*
Plan phase (PLPHi)			10x/0.25	20x/0.40	S40x/0.65			S100x/1.25 oil	
Plan semi-apo (PLi Apo)		4x/0.13	10x/0.30	20x/0.50	S40x/0.75			S100x/1.30 oil	

All objectives are 60 mm parfocal and have a M25 mounting thread, all optics are anti-fungus treated and anti-reflection coated for maximum light throughput and all S40x, S50x, S60x and S100x objectives are spring loaded  
\* Optional

### ENHANCED INFINITY SYSTEM (EIS)

The enhanced infinity system (EIS) of the Delphi-X Observer™ consists of super wide field SWF 10x25 mm eyepieces, high numerical aperture, 60 mm parfocal objectives and a 200 mm focal length tube lens. This focal length tube lens reduces the angle of the light rays passing the optics and as a direct result it improves 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

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

The Delphi-X Observer™ comes 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-ACHROMATIC 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) infinity corrected EIS objectives

### PLAN PHASE CONTRAST OBJECTIVES

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

### STAGE

The 190 x 152 mm stage has a 78 x 32 mm integrated right-handed mechanical stage. Comes with scratch-resistant Gorilla glass. Sapphire scratch-resistant glass is available on request. Left-handed mechanical stage is also available on request



● Sextuple nosepiece

### 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. Models with a motorized nosepiece are supplied with a motorized condenser that automatically flips out the front lens of the condenser when the 4x objective is used

### CONDENSER FOR PHASE CONTRAST

In height adjustable N.A. 1.25 Zernike phase contrast condenser with phase annuli for 10/20/40x and S100x-oil objectives. To be used with the phase contrast objectives

### DIFFERENTIAL INTERFERENCE CONTRAST (DIC)

The Normarski differential interference contrast technique helps to enhance contrast of samples and lets samples appear as three-dimensional objects. The equipment consist of a specific rotating DIC condenser, two Normarski modified Wollaston prisms, a DIC slider for insertion into the slot of the sextuple reversed nosepiece and a polarizer

## 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 kinds of samples. The diascopic NeoLED™ illumination comes with one neutral density filter

## LIGHT INTENSITY MEMORY FUNCTION

LIM automatically saves preferred brightness while changing magnifications. It eliminates the need for adjusting lamp brightness when changing magnification. This allows maintaining preferred brightness at each magnification, thus improving user efficiency significantly and reducing eye strain. Standard on all models with a motorized nosepiece, for other models see ordering instructions below

For ordering Automatic light intensity memory function

Example: DX.1153-PLi = DX.1153-PLi/LIM model but with automatic light control

## 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



• iCare sensor

- 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

## 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

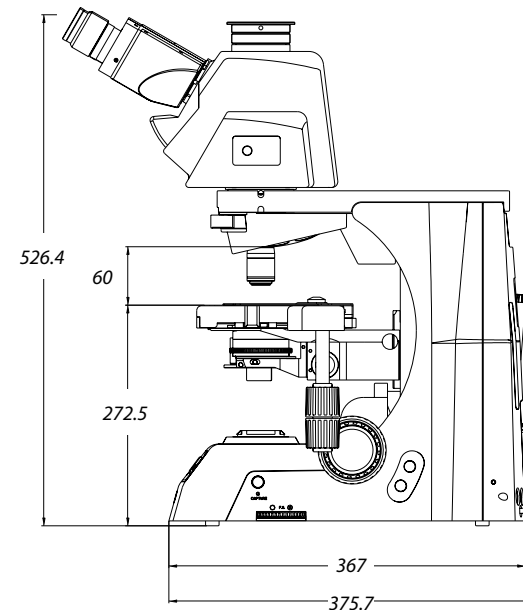
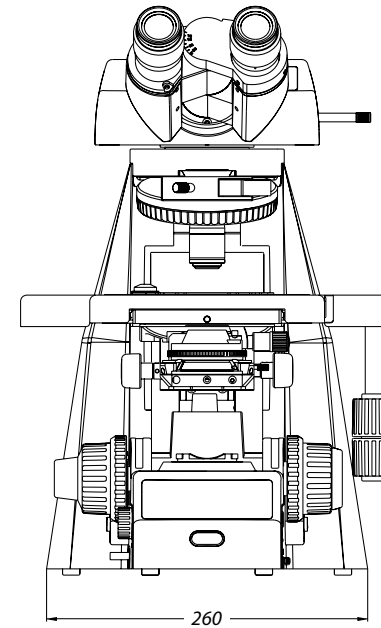
Supplied with power cord, dust cover, a spare fuse, user manual and 5 ml immersion oil. All packed in a polystyrene box



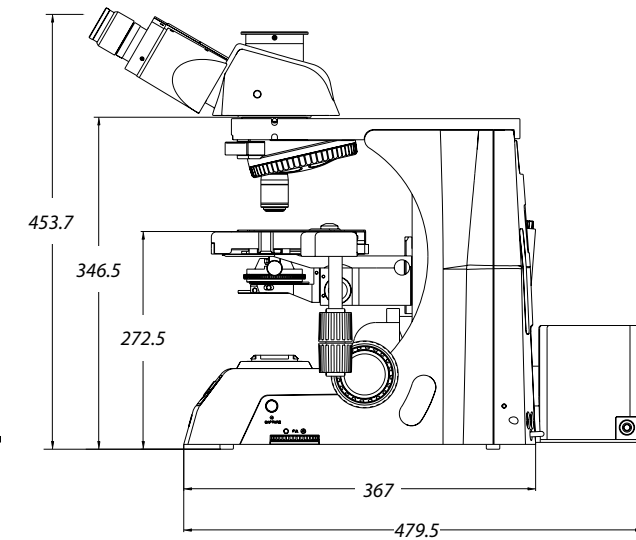
Nosepiece lowering attachment (DX.9887)



Eye-level riser (DX.9885)



• The motorized Delphi-X Observer™



## STANDARD MODELS

MODELS	Ergonomic tilting head	SWF 10x/25 mm eyepieces	Sextuple nosepiece	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.1158-PLi	•	•	•			•		
DX.1153-APLi		•	•		•		•	
DX.1158-APLi	•	•	•	•		•		
DX.1153-PLPHi		•	•			•	•	
DX.1158-PLPHi	•	•	•	•	•	•		
DX.2153-PLi		•	•	•				•
DX.2158-PLi	•	•	•				•	
DX.2153-APLi		•	•		•		•	
DX.2158-APLi	•	•	•	•			•	
DX.2153-PLPHi		•	•			•	•	
DX.2158-PLPHi	•	•	•	•	•	•		•



● DX.1153-PLPHi

## MOTORIZED MODELS

MODELS	Ergonomic tilting head	SWF 10x/25 mm eyepieces	Sextuple nosepiece	Plan 4/10/20/ S40/ S100x oil EIS objectives	Plan semi-apo 4/10/20/ S40/S100x oil EIS objectives	3 W NeoLED™ Köhler	100 W 24 V halogen Köhler
DX.1173-PLi		•	•	•		•	
DX.1178-PLi	•	•	•	•		•	
DX.1173-APLi		•	•		•	•	
DX.1178-APLi	•	•	•	•	•	•	
DX.2173-PLi		•	•	•			•
DX.2178-PLi	•	•	•	•			•
DX.2173-APLi		•	•		•	•	•
DX.2178-APLi	•	•	•	•	•	•	•

For ordering more motorized models, substitute the third digit "5" of the model reference with the digit "7"  
 Example: DX.1173-PLi = DX.1153-PLi model but with motorized nosepiece, flip-down condenser and automatic light control

## FACE-TO-FACE DUAL HEAD SYSTEMS

MODELS	Total users	Trinocular head SWF 10x/25 mm eyepieces	Binocular head SWF 10x/22 mm eyepieces	Sextuple nosepiece	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/25 mm eyepieces	Sextuple nose-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

## EYEPIECES

- DX.6010** Super wide field SWF 10x/25 mm eyepiece
- DX.6010-CM** Super wide field SWF 10x/25 mm eyepiece with micrometer and crosshairs
- DX.6210** Super wide field SWF 10x/22 mm eyepiece
- DX.6210-CM** Super wide field SWF 10x/22 mm eyepiece with micrometer and crosshairs
- 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

## OBJECTIVES

- DX.7201** Infinity EIS 60 mm Plan PLi 1x/0.04 objective. WD 3.2 mm
- 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.7710** Infinity plan phase PLPHi 10x/0.25 objective
- DX.7720** Infinity plan phase PLPHi 20x/0.40 objective
- DX.7740** Infinity plan phase PLPHi S40x/0.65 objective
- DX.7700** Infinity plan phase PLPHi S100x/1.25 oil objective

## STAGES

- 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\*
- DX.9504-RS** Option for right handed stage with Sapphire glass\*
- DX.9504-LS** Option for left handed stage with Sapphire glass\*

*\* Only with new Delphi-X Observer™ microscopes (resp. DX.xx5x-xxx/LG, DX.xx5x-xxx/RS and DX.xx5x-xxx/LS)*

## PHASE CONTRAST EQUIPMENT

- DX.9126** Phase contrast set with 10/20/S40 and S100x oil objectives, supplied with rotating disc phase contrast condenser with phase annuli and alignment telescope
- DX.9140** Rotating disc phase contrast condenser with phase annuli without objectives
- DX.9148** Alignment telescope for phase contrast, Ø 30 mm tube

## CONDENSERS

- DX.9105** Abbe condenser with 0.9/1.25 swing-out front lens
- DX.9110** Dry darkfield condenser
- DX.9112** Oil immersion darkfield condenser

## POLARIZER

- DX.9660** Simple polarization kit
- DX.9662** Special polarization kit for gout

## DIFFERENTIAL INTERFERENCE CONTRAST

- DX.9690** Rotating DIC and BF disc condenser without DIC prisms for life science Delphi Observer models. Needs one or more DIC-prisms (DX.9660-xx), slider with prism for nosepiece (DX.9693 and/or DX.9694) and DIC polarizer for transmitted light (DX.9695)
- DX.9690-10** DIC prism for rotating disc condenser (DX.9690) for life science Delphi Observer models. To be used with plan semi-apo 10x objective
- DX.9690-20** DIC prism for rotating disc condenser (DX.9690) for life science Delphi Observer models. To be used with plan semi-apo 20x objective
- DX.9690-40** DIC prism for rotating disc condenser (DX.9690) for life science Delphi Observer models. To be used with plan semi-apo 40x objective
- DX.9690-100** DIC prism for rotating disc condenser (DX.9690) for life science Delphi Observer models. To be used with plan semi-apo 100x objective
- DX.9693** Slider with DIC prism for nosepiece and to be used with plan semi-apo 10x and 20x objectives of life science Delphi Observer models
- DX.9694** Slider with DIC prism for nosepiece and to be used with plan semi-apo 40x and 100x objectives of life science Delphi Observer models
- DX.9695** DIC polarization filter for transmitted light

## CAMERA ACCESSORIES

- 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

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

## MISCELLANEOUS

- DX.9704** Yellow filter for lamphouse, diameter 45 mm
- DX.9885** 25.4 mm eye-level riser (1 inch)
- DX.9887** 40 mm nosepiece and stage lowering attachment
- DX.9960** 100 Watt 24 V halogen bulb (revision 1 models)
- DX.9961** 100 Watt 12 V halogen bulb (revision-2 models)
- DX.9993** 3 Watt LED replacement
- AE.5214** 500 mA 250 V fuses for LED models, 10 pieces
- AE.5216** 5 A 250 V fuses for Halogen models, 10 pieces

## DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack
- PB.5157-W** Microscope slides 76 x 26 mm, ground edges and frosted side white color, 50 pieces per pack
- PB.5157-B** Microscope slides 76 x 26 mm, ground edges and frosted side blue color, 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** Isopropyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

WD = Working distance



### 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



OX.3025 TO OX.3065  
397 (h) x 185 (w) x 294 mm (d) | 7.5 kg

## HIGHLIGHTS

- HWF 10x/22 mm eyepieces
- Binocular, trinocular and multihead systems
- Optional tilting head
- Reversed nosepiece for a maximum of five 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



Ergonomic tilting head

## 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  $30^\circ$  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 two, three or five 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,  $30^\circ$  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 five objectives on ball-bearings



Ceramic stage (mounted on an OX.3035)

## 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 76 x 50 mm 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. Higher temperatures can be achieved on special request

## 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	•							(1)	
OX.3045		•						(1)	
OX.3042	•								(2)
OX.3047		•							(2)
OX.3050	•					•			
OX.3055		•				•			
OX.3060	•					•	•		
OX.3065		•				•	•		
OX.3064	•			•				(3)	
OX.5602		(4)		•	•				
OX.5603		(5)		•	•				
OX.5605		(6)		•	•				

(1) Plan phase objectives supplied with AE.3184 condenser with four phase contrast rings

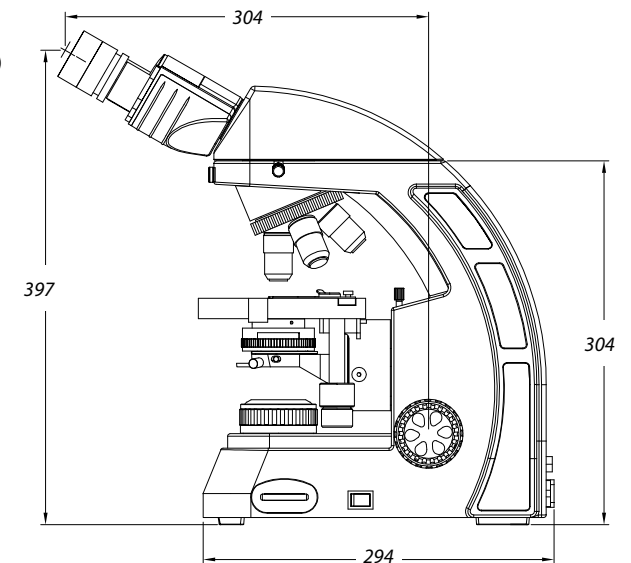
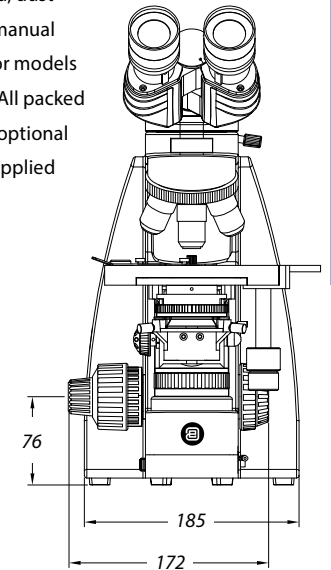
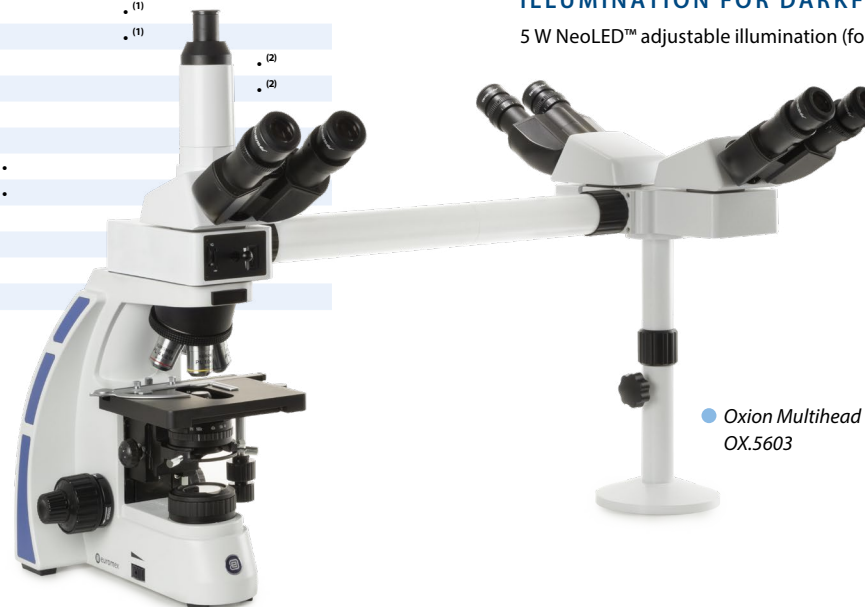
(2) Plan phase objectives supplied with AE.3183 condenser with three phase contrast rings and one stop for darkfield

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

(4) Multihead system, supplied with a trinocular and one binocular head

(5) Multihead system, supplied with a trinocular and two binocular heads

(6) Multihead system, supplied with a trinocular and four binocular heads





# ACCESSORIES AND SPARE PARTS

## EYEPIECES

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

## OBJECTIVES

- AE.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.3168** Semi plan S60x/0.85 infinity corrected IOS objective. WD 0.12 mm
- AE.3170** 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

## PHASE CONTRAST ATTACHMENTS

- AE.3180** Telescope for alignment of phase contrast rings
- AE.3183** Phase contrast Zernike condenser with three phase rings and one darkfield stop and plan phase PLPH 10x, S40x, S100x oil objectives
- AE.3184** Phase contrast Zernike condenser with four phase rings and plan phase PLPH 10x, 20x, S40x, S100x oil objectives
- AE.3186** Slider phase contrast kit with plan phase 10x/20x/40x/S100x oil objectives and two 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.3184

## POLARIZATION ATTACHMENTS

- AE.3190** Polarizer/analyzer set
- AE.3192** Polarizer slider for nosepiece
- AE.3194** Polarizer for lamphouse

## FILTERS

- 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

## CAMERA ACCESSORIES

- 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 tubes 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

## MISCELLANEOUS

- AE.3185** Slider with darkfield stop (only for objectives 10x, 20x and S40x)
- 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

## DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, n = 1.482 (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
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox

WD = working distance



● OX.3035



# LIFE SCIENCE MICROSCOPES

**BlueLine**  
DUTCH QUALITY

**NeoLED™**  
euromex optical technology

LIFE SCIENCE  
BIOLOGICAL MICROSCOPES

4



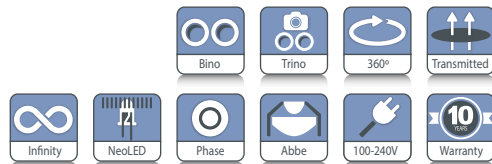
● BB.1153-PLi

## BioBlue.Lab

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

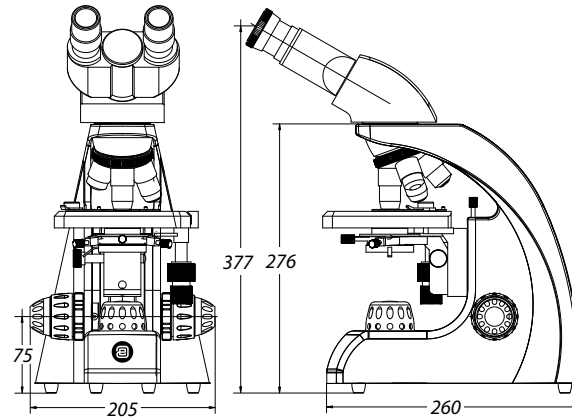
All models are equipped with NeoLED™ illumination system for high resolution images and are available in binocular and trinocular versions

**BB.1152-PLi**  
378 (h) x 190 (w) x 260 mm (d) | 5.4 kg  
**BB.1153-PLi**  
448 (h) x 190 (w) x 260 mm (d) | 5.6 kg



## HIGHLIGHTS

- WF 10x/20 mm eyepieces
- Binocular and trinocular models
- Reversed quadruple nosepiece
- Plan and plan phase objectives
- Non-infinity and infinity optical system
- Integrated rackless mechanical stage
- 3 W NeoLED™ illumination
- Ergonomic carrying grip
- 10 Years warranty



These ergonomic easy-to-use microscopes have been designed specifically 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 IOS plan phase contrast objectives 10x / 20x / S40x / S100x, which are infinity corrected



● BB.1153-PLPHi



● BioBlue

● BioBlue.Lab

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.**

LIFE SCIENCE  
BIOLOGICAL MICROSCOPES

4

## 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.

Slot for analyzer (BB.9602)

### OBJECTIVES

BioBlue.Lab microscopes are equipped with plan, plan IOS (infinity corrected) and plan phase IOS (infinity corrected) 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



● BB.9126

### 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-PLPHi	•					•	•	•	5.6
BB.1153-PLPHi		•				•	•	•	5.7

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

- BB.6010** WF 10x/20 mm eyepiece, 30 mm tube
- BB.6110** WF 10x/20 mm eyepiece, 30 mm tube with micrometer reticle
- BB.6015** WF 15x/15 mm eyepiece, 30 mm tube
- BB.6020** WF 20x/11 mm eyepiece, 30 mm tube
- BB.6099** Pair of eyecups

### OBJECTIVES

- 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/0.80 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.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 IOS objective. WD 0.50 mm

WD = working distance

### MISCELLANEOUS

- BB.9126** Zernike phase contrast kit with PLPHi IOS objectives and rotating phase contrast disc with four annuli, centering telescope and green filter
- BB.9602** Analyzer in slider, Ø 25 mm. Fits in nosepiece
- BB.9707** White filter Ø 32 mm. Fits in filter holder
- BB.9732** Polarization filter, 32 mm diameter. Fits in filter holder
- BB.9880** Köhler attachment
- BB.9993** 3 W NeoLED™ replacement unit
- BB.9900** Aluminum case

### CAMERA ACCESSORIES

- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Needs T2 adapter
- AE.5040** T2 adapter for Canon EOS SLR digital camera
- AE.5025** T2 adapter for Nikon D SLR digital camera

### DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5157-W** Microscope slides 76 x 26 mm, ground edges. White frosted side, 50 pieces per pack
- PB.5157-B** Microscope slides 76 x 26 mm, ground edges. Blue frosted side, 50 pieces per pack
- 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
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox



● BioBlue.Lab with phase contrast



- Life science applications
- Observation of tissue cultures, living cells
- Brightfield and phase contrast
- Long working distance IOS plan achromatic objectives
- Revolving quintuple nosepiece
- 5 W LED transmitted illumination
- 10 Years warranty

- Micromanipulator for intracytoplasmic sperm injection (ICSI)



• OX.2053-PLPH

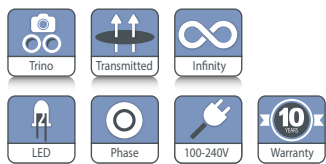
## Oxion Inverso

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 is available in two configurations:

- for brightfield and phase contrast
- for fluorescence (see chapter on fluorescence)

Dedicated objectives are suitable for 1.2 mm thick glass bottoms of cell culture dishes and flasks



**BRIGHTFIELD OX.2003-PL / OX.2053-PL**  
488 (h) x 231 (w) x 555 mm (d) | 12.0 kg  
**PHASE CONTRAST OX.2203-PLPH / OX.2253-PLPH**  
488 (h) x 231 (w) x (d) 555 mm (d) | 12.0 kg

## 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

### FLUAREX OBJECTIVES FOR BRIGHTFIELD

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

### FLUAREX OBJECTIVES FOR PHASE CONTRAST

Infinity color corrected long working distance plan Fluarex 10x/0.30 and plan phase Fluarex 20x/0.45 and 540x/0.65 IOS objectives

*All objectives corrected for 1.2 mm thickness.*

*Fluarex™ objectives are made of low-absorption glass  
Fluarex™ is a trademark of Euromex microscopen bv*

*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:

- Stage extension plate
- Metal insert for Ø 65 mm cell culture dish or Multiwell
- Metal insert for 76 x 26 mm slides and 54 mm cell dish (only for models with X-Y stage)
- 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 supplied 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

Oxion Inverso can be extended with fluorescence equipment

## FILTERS FOR PHASE CONTRAST MODELS

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

## PACKAGE CONTENT

Supplied with metal insert with Ø 25 mm hole, metal insert for Ø 35 mm cell culture dish, blue LBD and green 550 nm interference Ø 45 mm filter, power cord, dust cover and user

manual. Phase contrast models are supplied with 4x/10x and 20x/40x phase contrast annuli in slider, green filter and alignment telescope

## ICSI SET (AE.8000)

(Intracytoplasmic sperm injection)

- Perfect for inexperienced users in need of training practice as well as for professionals
- Complete manual system
- Large movement range
- Easy micropipette repositioning
- Adjustable micropipette holder angle between 20° and 40°
- Micropipette holder fixing knob reduces vibration and provides easy handling of the sperm
- Easy installation and service
- 3D Hydraulic manipulation joysticks for smooth movement
- Pneumatic air injector for ICSI and holding
- No service required for injector
- Identical sensitive injectors on both sides and interchangeable
- Top quality for affordable price
- Medical device CE mark
- Movement range: X/Y/Z: 20 mm each, 1 mm for one complete turn of the handle
- Optional heating stage with controller

Set includes two 3D hydraulic joysticks, two pipette setup mechanisms, one connection bar with moving handle, two air injectors with tubing and pen type micromanipulation, pipette holder, two metal plates for injectors, one set of Allen wrenches, one ruler for mechanic home position adjustment

MODELS	LWD Plan 10x/20x/40x objectives	LWD Plan phase 10x/20x/40x objectives	Mechanical stage	ICSI equipment
OX.2003-PL	•			
OX.2053-PL	•		•	
OX.2003-PLPH		•		
OX.2053-PLPH		•	•	
OX.2003-PLPH-ICSI		•		•
OX.2053-PLPH-ICSI		•	•	•

LWD = long working distance

## HEATING STAGES AE.8010 AND AE.8015

Heating glass stage for Euromex microscope stage with 110 mm circular hole. The glass plate fits the circular opening of the X-Y stage and enables a flat glass object-plate with constant temperature. The stage has an aluminum frame for superior resistance and flatness. Glass thickness 0.5 mm. Plate diameter 110 mm



• AE.8010 Controller

### Controller AE.8010

- 2-Channel Temperature Controller with touchscreen interface
- One controller can control up to two devices
- External temperature sensor (included) and self calibration routines allow easy calibration of the heating devices
- On-board data logging allows for recording temperature as a function of time and logging calibration events and alarms
- The password protected controller is equipped with routines to re-calibrate the sensors against certified thermometers
- Temperature range: from ambient to 60°C
- Temperature accuracy on specimen: ± 0.3°C
- 4.3" touch screen interface
- External temperature sensor
- On-board data logging to USB drive
- Alarm buzzer and external alarm connector
- One controller can control up to two devices
- Self calibration routines enable high temperature accuracy



• Heating stage with AE.8015 controller

### Controller AE.8015

This is the economic and compact single-channel Temperature Controller version of the AE.8010.

This model combines performance and simplicity at a economic price

- Single channel Temperature controller with LCD display temperature control push buttons.
- Small and robust while maintaining reliability
- Straight forward in usage
- Temperature range: from ambient to 60°C
- Set point Resolution: 0.1°C
- One-Point Temperature Calibration and Adjustment



• OX.2053-PLPH-ICSI Oxion Inverso with ICSI equipment (intra-cytoplasmic sperm injection)

# 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

## PLAN OBJECTIVES FOR BRIGHTFIELD<sup>(1)</sup>

- OX.8304** PL LWD 4x/0.10 IOS objective, WD 22 mm
- OX.8310** PL LWD 10x/0.25 IOS objective, WD 7.94 mm
- OX.8320** PL LWD 20x/0.40 IOS objective, WD 7.66 mm
- OX.8340** PL LWD 40x/0.60 IOS objective, WD 3.71 mm
- OX.8360** PL LWD 60x/0.70 IOS objective, WD 1.7 mm

## PLAN FLUAREX OBJECTIVES FOR BRIGHTFIELD AND FLUORESCENCE<sup>(1)</sup>

- OX.8604** PL FL LWD 4x/0.13 IOS objective, WD 18.5 mm
- OX.8610** PL FL LWD 10x/0.30 IOS objective, WD 7.1 mm
- OX.8620** PL FL LWD 20x/0.45 IOS objective, WD 5.91 mm
- OX.8640** PL FL LWD 40x/0.65 IOS objective, WD 1.61 mm
- OX.8660** PL FL LWD 60x/0.75 IOS objective, WD 1.04 mm

## PLAN PHASE CONTRAST OBJECTIVES<sup>(1) (2)</sup>

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

## OBJECTIVES FOR FLUORESCENCE AND PHASE CONTRAST<sup>(1) (2) (3)</sup>

- OX.8720** Plan phase Fluarex LWD 20x/0.45 infinity corrected IOS objective. WD 5.91 mm<sup>(1)</sup>
- OX.8740** Plan phase Fluarex LWD 40x/0.65 infinity corrected IOS objective. WD 1.1 mm<sup>(1)</sup>

<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

<sup>(3)</sup> Phase contrast objectives require slider with phase contrast annuli OX.9163

All optical parts are anti-fungus treated

## PHASE CONTRAST ATTACHMENTS

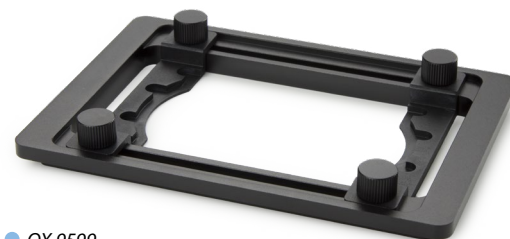
- OX.9148** Telescope for phase contrast fluorescence alignment
- OX.9149** Telescope for phase contrast alignment
- OX.9190** Slider with 4x/10x and 20x/40x phase contrast annuli

## CAMERA ACCESSORIES

- 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 photo port revision-2
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes  
Needs T2 adapter and AE.5120 or AE.5120-2
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras

## STAGES AND HOLDERS

- OX.9500** Mechanical coaxial X-Y 120 x 78 mm stage
- OX.9506** Transparent glass insert with Ø 30 mm hole
- OX.9508** Metal insert with Ø 25 mm hole
- OX.9510** Metallic insert for Ø 65 mm cell culture dish and Multiwell
- OX.9512** Metal insert with 76 x 26 mm slide holder and Ø 55 mm cell culture dish holder
- OX.9535** Metal insert for Ø 35 mm cell culture dish holder
- OX.9550** Stage extension plate
- OX.9599** Universal cell culture dish holder



● OX.9599

## MICROMANIPULATOR ATTACHMENT

- AE.8000** Micromanipulator for intracytoplasmic sperm injection (ICSI) suitable with the Oxion Inverso inverted microscope
- AE.8010** Heating stage with transparent glass plate for AE.8000 Micromanipulator, including advanced digital temperature controller
- AE.8015** Heating stage with transparent glass plate for AE.8000 Micromanipulator, including basic 1-channel digital temperature controller

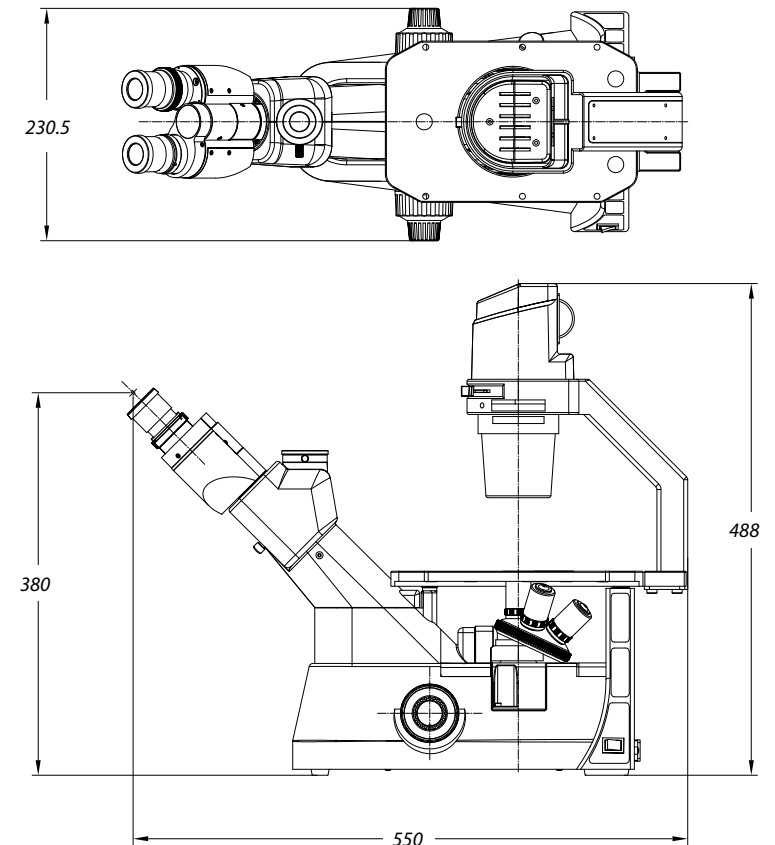
## MISCELLANEOUS

- OX.9700** Blue filter Ø 45 mm
- OX.9985** 5 W NeoLED™ replacement unit
- AE.3199** Glass fuses 3.15 A 250 V packed, per 100 pieces

## DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, n = 1.482 (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

WD = working distance



● Accessories supplied with phase contrast models

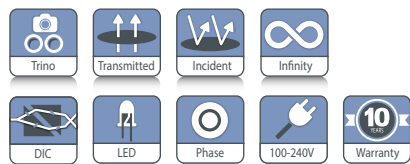
## Delphi-X Inverso

Delphi-X Inverso™ is an inverted microscope for the professional with demanding applications of living cell cultures and stained samples. It is available in two configurations:

- for phase contrast plus DIC (differential interference contrast) equipment
  - for fluorescence application
- Super contrast semi-apochromatic objectives with collar adjustment ring assure perfect observation of cells or tissues in 1.2 mm thick Petri dishes or flasks

• DI.1053-PLPHi

**PHASE CONTRAST DI.1053-PLPHI**  
686.5 (h) x 276 (w) x 800 mm (d) | 31 kg



## HIGHLIGHTS

- Life science applications
- Observation of tissue cultures, living cells
- Brightfield, phase contrast
- DIC (differential interference contrast)
- Long working distance IOS plan achromatic objectives
- Revolving quintuple nosepiece
- 10 W LED or 100 W halogen reflected illumination
- 10 W LED or 100 W halogen transmitted illumination
- Backwards tilting condenser arm
- Easy placement of large objects
- 10 Years warranty

## SPECIFICATIONS

## EYEPIECES

Pair of DIN HWF plan 10x/25 mm or 10x/22 mm eyepieces with diopter adjustment

## HEAD

Trinocular 45° inclined tubes. Interpupillary distance of 47 to 78 mm. Trinocular head with 100-0, 80/20 and 0/100 positions

## NOSEPIECE

Revolving sextuple nosepiece on ball-bearings. The nosepiece can be equipped with DIC prisms for the 10x/20x/40x and 60x objectives

## OBJECTIVES

High numerical infinity semi-apochromatic long working distance plan phase Fluorex PLPHFi 10x/0.30, 20x/0.45, S40x/0.60 IOS objectives enable the sub-cellular structures. An optional 4x/0.13 and 60x/0.70 IOS objectives are also available. The 20x, 40x and optional 60 objectives are equipped with collar adjustment ring for glass thicknesses from 0 to 1.2 mm

*Fluorex™ objectives are made of low-absorption glass.*

*Fluorex™ is a trademark of Euromex microscopen bv.*

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



- Phase contrast and differential interference contrast condenser

## STAGE

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

- Metal insert for O 38 mm cell culture dish
- Metal insert for O 54 mm cell culture dish or 76 x 26 mm slides
- Metal insert for Multiwell plates (127.76 x 85.48 mm)
- Metal insert for Teraski plates (83.3 x 58.0 mm)
- Optional universal cell culture holder

## CONDENSER

Rotating N.A. 0.55 condenser with iris diaphragm. Working distance is 26 mm. Supplied with phase contrast annuli for 10x/20x, 40x and 60x objectives and the DIC prisms for the 10x/20x/40x and 60x objectives. Three filter holders allow the insertion of Ø 38 mm filters in the optical path. The arm with condenser can be tilted backwards for convenient access to the stage. This allows easy placement of large objects like flasks and Petri dishes



## LENS CHANGER

A lens changer with a 1.5x lens allow intermediary magnifications of 1.5 times the standard objective magnifications. Switching from 20x to 30x or 40 to 60 and from 60x to 90x magnification can be done without the need to re-focus on the sample

## FLUORESCENCE FILTER SET WHEEL

The Delphi-X Inverso is supplied with a 6-position fluorescence filter set wheel. See photo below



## FOCUSING ADJUSTMENT

Coaxial 10 mm coarse and fine adjustments, 1 µm precision and with friction adjustment

## ILLUMINATION

Incident 10 W LED or 100 W halogen Intensity adjustable with internal 100-240 V power supply. Transmitted 10 W LED or 100 W halogen illumination. Fuse holder 5 A / 250 V. Delphi-X Inverso can be extended with fluorescence equipment

## PACKAGE CONTENT

Supplied with metal insert for Ø 38 mm cell culture dish and a metal insert for Ø 54 mm cell culture dish with 76 x 26 mm slides, metal insert for Multiwell plates, metal insert for Teraski plates, blue and green interference Ø 45 mm filters, power cord, dust cover, green filter and alignment telescope and user manual

## ICSI SET

(Intracytoplasmic sperm injection)

- Perfect for inexperienced users in need of training practice as well as for professionals
- Complete manual system
- Large movement range
- Easy micropipette repositioning
- Adjustable micropipette holder angle between 20° and 40°
- Micropipette holder fixing knob reduces vibration and provides easy handling of the sperm
- Easy installation and service
- 3D Hydraulic manipulation joysticks for smooth movement
- Pneumatic Air Injector for ICSI and holding
- No service required for injector
- Identical sensitive injectors on both sides and interchangeable
- Top quality for affordable price
- Medical device CE mark
- Movement range: X/Y/Z: 20 mm each, 1 mm for one complete turn of the handle
- Optional heating stage with controller

Set includes two 3D hydraulic joysticks, two pipette setup mechanisms, one connection bar with moving handle, two air injectors with tubing and pen type micromanipulation, pipette holder, two metal plates for injectors, one set of Allen wrenches, one ruler for mechanic home position adjustment. Unit is packed in a solid carry case

## HEATING STAGES AE.8010 AND AE.8015

Heating glass stage for Euromex microscope stage with 110 mm circular hole. The glass plate fits the circular opening of the X-Y stage and enables a flat glass object-plate with constant temperature. The stage has an aluminum frame for superior resistance and flatness. Glass thickness 0.5 mm. Plate diameter 110 mm

### Controller AE.8010

- 2-Channel Temperature Controller with touchscreen interface
- One controller can control up to two devices
- External temperature sensor (included) and self calibration routines allow easy calibration of the heating devices

- On-board data logging allows for recording temperature as a function of time and logging calibration events and alarms
- The password protected controller is equipped with routines to re-calibrate the sensors against certified thermometers
- Temperature range: from ambient to 60°C
- Temperature accuracy on specimen: ± 0.3°C
- 4.3" touch screen interface
- External temperature sensor
- On-board data logging to USB drive
- Alarm buzzer and external alarm connector
- One controller can control up to two devices
- Self calibration routines enable high temperature accuracy



• AE.8010 Controller



• Heating stage with AE.8015 controller

### Controller AE.8015

This is the economic and compact single-channel Temperature Controller version of the AE.8010. This model combines performance and simplicity at a economic price

- Single channel Temperature controller with LCD display temperature control push buttons.
- Small and robust while maintaining reliability
- Straight forward in usage
- Temperature range: from ambient to 60°C
- Set point Resolution: 0.1°C
- One-Point Temperature Calibration and Adjustment



• Filters in sliders



DI.1053-PLPHFi •

MODELS	LWD Plan phase 10x/20x/540x objectives	100 W Halogen incident illumination	10 W LED incident illumination
DI.1053-PLPHFi	•		•
DI.2053-PLPHFi	•	•	

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

- DI.6010** Super wide field SWF 10x/25 mm eyepiece
- DI.6010-C** Super wide field SWF 10x/25 mm eyepiece with crosshairs
- DI.6010-M** Super wide field SWF 10x/25 mm eyepiece with micrometer
- DI.6010-CM** Super wide field SWF 10x/25 mm eyepiece with micrometer and crosshairs
- DI.6010-SG** Super wide field SWF 10x/25 mm eyepiece with 20 x 20 square grid reticle
- DI.6012** Wide field WF 12.5x/17.5 mm eyepiece
- DI.6015** Wide field WF 15x/16 mm eyepiece
- DI.6020** Wide field WF 20x/12 mm eyepiece
- DI.6099-L** Eyecups for eyepiece

### OBJECTIVES

- DI.8704** Infinity semi-apochromatic long working distance plan Fluarex PLFi 4x/0.13, IOS objective. WD 16.8 mm
- DI.8710** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi 10x/0.30, IOS objective PLPHi 10x/0.30 objective. WD 10.2 mm
- DI.8720** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi 20x/0.45 objective. WD 7.5 to 8.8 mm
- DI.8740** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi S40x/0.60 IOS objective. WD 3 to 4.4 mm
- DI.8760** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi S60x/0.70 IOS objective. WD 1.8-2.6 mm



### DIFFERENTIAL INTERFERENCE CONTRAST

- DI.9690** Rotating DIC and BF disc condenser without DIC prisms for life science Delphi-X Inverso models. Needs one or more DIC-prisms (DI.9660-xx)
- DI.9690-10** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models
- DI.9690-20** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models
- DI.9690-40** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models
- DI.9690-60** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models
- DI.9693-10** DIC insert with small prism to be used with 10x objective DI.8710
- DI.9693-20** DIC insert with small prism to be used with 20x objective DI.8720
- DI.9693-40** DIC insert with small prism to be used with 10x objective DI.8740
- DI.9693-60** DIC insert with small prism to be used with 10x objective DI.8760

### MICROMANIPULATOR ATTACHMENT

- AE.8000** Micromanipulator for intracytoplasmic sperm injection (ICSI) suitable with the Oxion Inverso inverted microscope
- AE.8010** Heating stage with transparent glass plate for AE.8000 Micromanipulator, including digital temperature controller
- AE.8015** Heating stage with transparent glass plate for AE.8000 Micromanipulator, including basic 1-channel digital temperature controller

### CAMERA ACCESSORIES

- DI.9810** C-mount with 1x magnification for C-mount camera
- DI.9835** C-mount with high resolution relay 0.35x objective for 1/3 inch C-mount camera
- DI.9850** C-mount with high resolution relay 0.50x objective for 1/2 inch C-mount camera
- DI.9863** C-mount with high resolution relay 0.63x objective for 2/3 inch C-mount camera

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

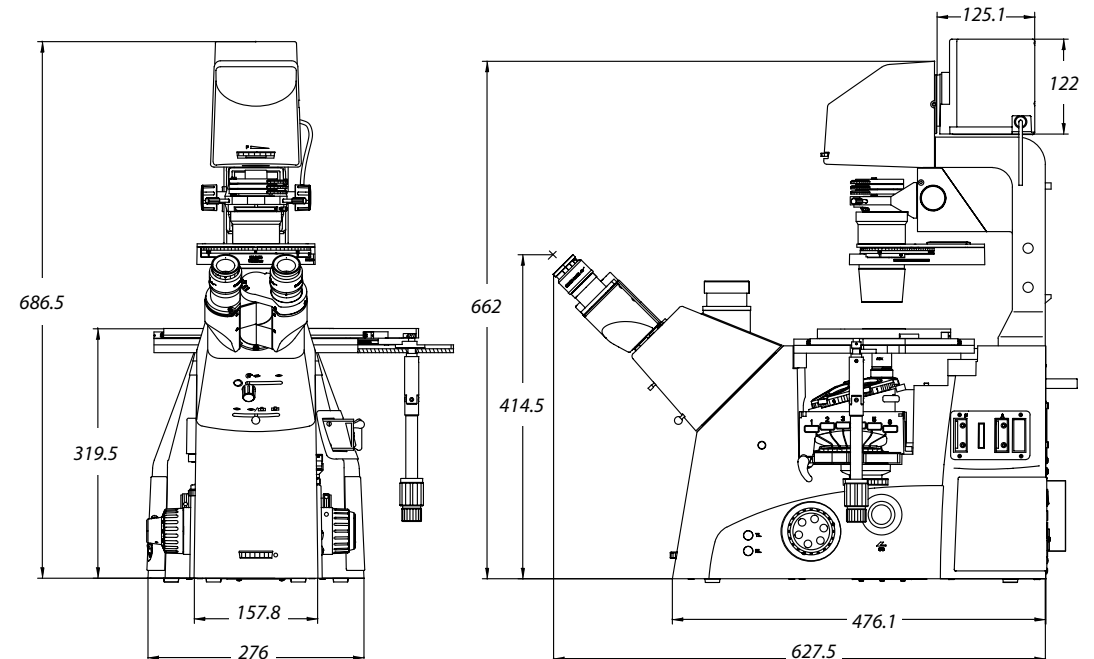
### MISCELLANEOUS

- DI.9961** 100 Watt 12 V halogen bulb
- DI.9997** 10 Watt LED replacement
- DI.9997-R** 10 Watt LED replacement for reflected illumination
- AE.5214** 500 mA 250 V fuses for LED models, 10pcs
- AE.5216** 5 A 250 V fuses for Halogen models, 10pcs

### DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack
- PB.5157-W** Microscope slides 76 x 26 mm, ground edges and frosted side white color, 50 pieces per pack
- PB.5157-B** Microscope slides 76 x 26 mm, ground edges and frosted side blue color, 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** Isopropyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

WD = working distance



# life science

## fluorescence microscopes



## fluorescence microscopes

Euromex offers a wide range of life science upright and inverted microscopes  
for researchers and biologists worldwide

On the next pages you will find all models that can be used in life science fluorescence applications,  
using mercury vapor lamps or LED technology together with optimized fluorescence filter sets



- ISCOPE FLUORESCENCE • PAGE 160
- BSCOPE FLUORESCENCE • PAGE 166
- DELPHI-X OBSERVER FLUORESCENCE • PAGE 172
- OXION FLUORESCENCE • PAGE 178
- OXION INVERSO FLUORESCENCE • PAGE 184
- DELPHI-X INVERSO FLUORESCENCE • PAGE 190
- EUROMEX LED SOURCES • PAGE 196
- FLUORESCENCE FILTER SETS • PAGE 198



# LIFE SCIENCE MICROSCOPES

iscope®

FEATURED



● IS.3152 PLi-3

## iScope® fluorescence

The excellent optics and mechanical components make the iScope® a state-of-the-art microscope that is amongst others suitable for fluorescence applications in life science and biotechnological 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  
407 (h) x 210 (w) x 255 mm (d) | 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 Fluorex 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 beam splitter (50:50) and one ± 5 diopter adjustment on the Ø 30 mm left tube

### HEAD

Binocular and trinocular Siedentopf type heads are equipped with 30° inclined tubes, interpupillary distance from 48 to 76 mm and 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

### 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*	S40x/0.65	S60x/0.85*	S100x/1.25 oil
Plan PLFi IOS	4x/0.15	10x/0.35	20x/0.60*	S40x/0.75		S100x/1.30 oil

\* optional: the plan Fluorex PLFi™ objectives are suitable for violet and ultra violet excitation  
All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

attachment are also available (only infinity corrected models)  
To order an iScope® with tilting head use reference IS.3158-xxx

### NOSEPIECE

Revolving and reversed nosepiece for a maximum of five objectives

### OBJECTIVES

See table below

### 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 with a very tough ceramic surface, protects against marks and scratches. The surface also ensures stray light not to be reflected from the stage into the objective

### 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™ diascopic 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 life span

The Köhler illumination on models with IOS plan and plan phase infinity corrected systems 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 a 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 filter sets for blue excitation (EX460-490 (BP) DM500 EM520 (LP)) and green excitation (EX510-550 (BP) DM570 EM590 (LP)) and a UV protection shield. Optional standard fluorescence filters for UV excitation (EX330-385 (BP) DM400 EM420 (LP)) and violet excitation (EX400-410 (BP) DM455 EM455 (LP))

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

Two single position fluorescence attachments are supplied with EX 460-495 DM 505 EM 510-560 BP filter set and a 3 W 465-475 nm LED for blue excitation or EX 510-550 DM570 EM 590 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

### 6-POSITION ROTATING ATTACHMENT

With 100 W mercury vapor light source. The 6-position rotating fluorescence attachments are supplied with a standard 100 W HBO mercury vapor light source for a broad powerful light spectrum. Supplied with standard fluorescence filter 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		•	•		•			•	•	•	•

### 3-POSITION SLIDER ATTACHMENT

With 100 W mercury vapor light source. The 3-position slider fluorescence attachments are supplied with standard 100 W HBO mercury vapor light source for a broad powerful light spectrum. Supplied with standard fluorescence filter 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		•	•		•			•	•	•	•

### 1-POSITION SLIDER ATTACHMENT

Blue: single position slider fluorescence attachment with a 3 W NeoLED™ 465-475 nm blue light source and with a 460-495 nm filter for blue excitation (/L). Green: single position slider fluorescence attachment with a 3 W NeoLED™ 520-530 nm green light source and with a 510-550 nm filter for green excitation (/G)

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

## EYEPIECES

- IS.6210** EWF 10x/22 mm eyepiece (Ø 30mm tube)
- IS.6210-C** EWF 10x/22 mm eyepiece with crosshairs (Ø 30 mm tube)
- IS.6210-P** EWF 10x/22 mm eyepiece with pointer (Ø 30 mm tube)
- IS.6210-CM** EWF 10x/22 mm eyepiece with 10/100 micrometer and crosshairs (Ø 30 mm tube)
- IS.6212** WF 12.5x/17 mm eyepiece (Ø 30 mm tube)
- IS.6215** WF 15x/16 mm eyepiece (Ø 30 mm tube)
- IS.6220** WF 20x/12 mm eyepiece (Ø 30 mm tube)
- IS.6299** Pair of eyecups infinity models

## OBJECTIVES

- 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/0.05 IOS objective, WD 18.3 mm. Best 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.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

## CONDENSERS

- 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

## PHASE CONTRAST ATTACHMENTS

- IS.9124** Zernike phase contrast set PLPH 10/20/40/100 brightfield 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 Ø30 mm tube
- IS.9149** Telescope for phase contrast Ø 23.2 mm tube
- 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.9194** Slider with phase contrast annuli for S40 phase contrast objective

## POLARIZATION ATTACHMENTS

- IS.9600** Polarization filter 45 mm for lamphouse
- IS.9601** Polarization set: simple rotating polarizer for lamphouse and fixed polarizer mounted under head
- IS.9626** Polarization filter for mounting under the head

## FILTERS

- 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

## MISCELLANEOUS

- IS.9170** Slider with darkfield stop
- IS.9503** Large ceramic stage. Only with new microscopes, add /C suffix after iScope® model part number
- IS.9880** Köhler attachment
- 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
- AE.3684** Glass fuses 500 mA 250 V, 10 pieces
- AE.5168-I** Heating stage series with controller, only with new microscopes
- SL.1385** 100 W HBO mercury vapor lamp for fluorescence
- SL.5500** NeoLED™ replacement unit

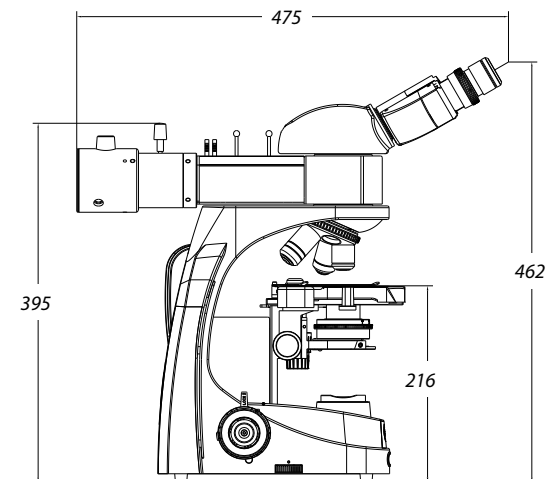
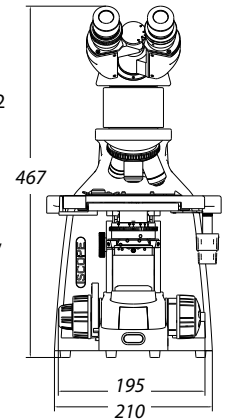
## CAMERA ACCESSORIES

- IS.9800** Single photo tube attachment with one Ø 23.2 mm tube for IS.5700 ergonomic tilting head of iScope® infinity systems
- AE.5130** Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D SLR digital camera
- AE.5040** T2 adapter for Canon EOS SLR digital camera

## DISPOSABLES

- 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** Isopropyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs

WD = working distance





# LIFE SCIENCE MICROSCOPES

bscope®

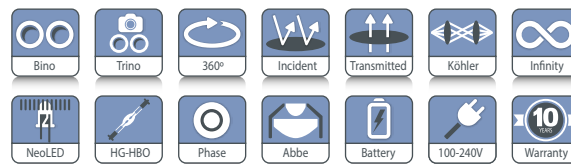
FEATURED

## 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

● BS.3153-PLi



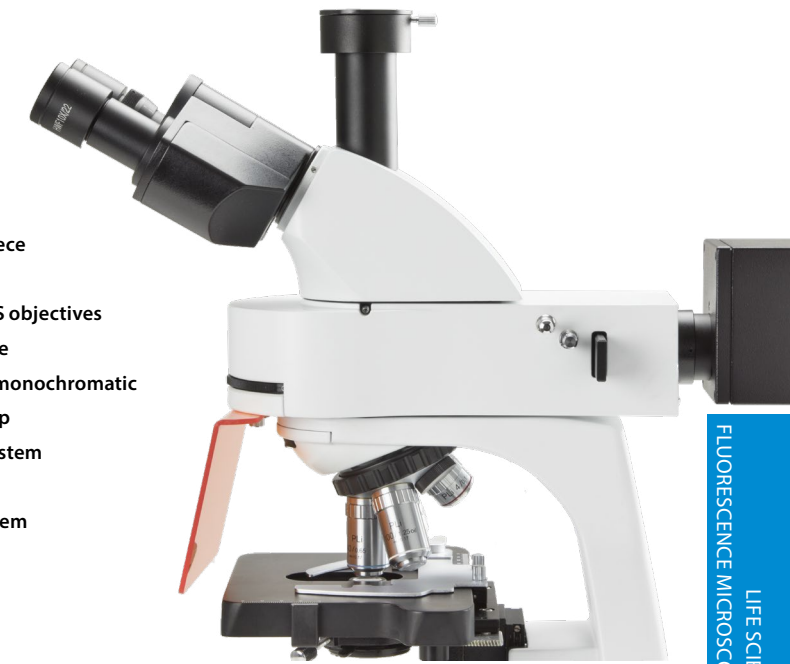
### TRINOCULAR MODELS

BS.3153-EPLi/H, BS.3153-PLi/H AND BS.3153-PLFi/H

505 (h) x 195 (w) x 450 mm (d) | 8.8 kg

## HIGHLIGHTS

- Trinocular models
- WF 10x/22 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 four 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 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

- 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 is needed or violet or Ultra-Violet excitation

*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 are available in either EPL-PHi or PL-PHi 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 available 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 5 W LEDs for fluorescence excitation from 450 to 470 nm (blue), 415 to 535 nm (green), 390 to 400 (violet) and 360 to 370 nm (ultraviolet). External 100-240 V power supply
- Fluorescence filter set for blue excitation (EX450-495 (BP) DM505 EM515 (LP)), green excitation (EX495-555 (BP) DM580 EM595 (LP)), UV excitation (EX320-380 (BP) DM420 EM435 (LP)) and violet excitation (EX380-415 (BP) DM460 EM475 (LP))
- UV protection shield
- Epi-illumination with 100 W HBO mercury vapor lamp. External 110 or 230 V power supply

## 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 life span

*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 ●

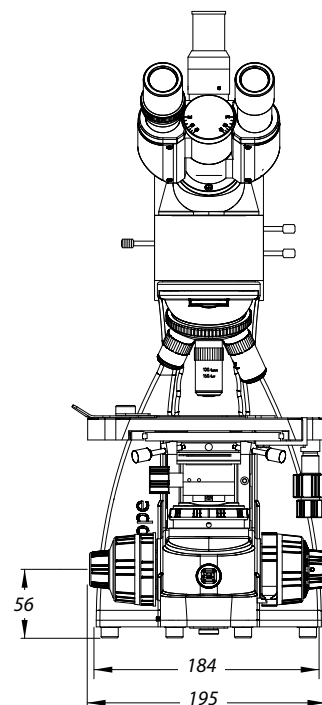
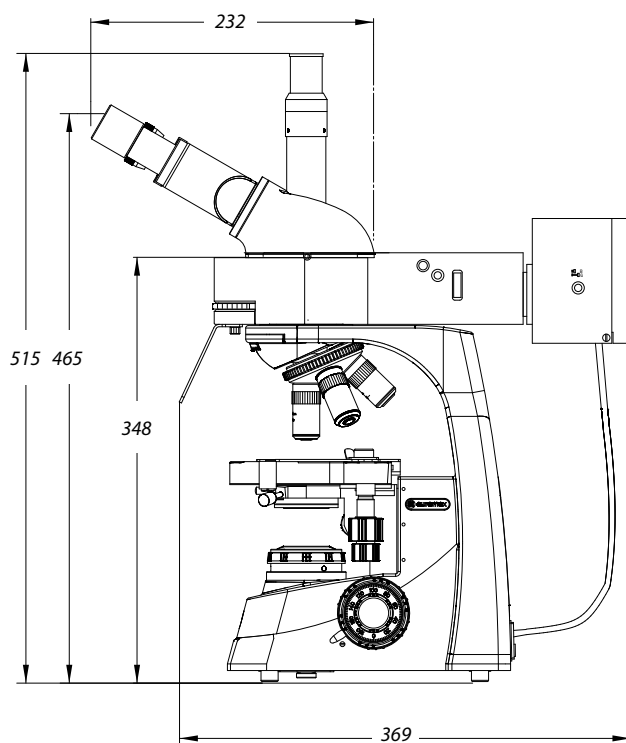
## BSCOPE® WITH EPI-FLUORESCENCE 4 LED ILLUMINATION (BLUE, GREEN, VIOLET AND ULTRA-VIOLET)

MODELS	Trinocular	HWF 10x/22 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 *
BS.3153-EPLi	•	•	•		
BS.3153-PLi	•	•		•	
BS.3153-PLFi	•	•		•	•

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

MODELS	Trinocular	HWF 10x/22 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 *
BS.3153-EPLi/HBO	•	•	•		
BS.3153-PLi/HBO	•	•		•	
BS.3153-PLFi/HBO	•	•		•	•

\*The plan Fluarex infinity corrected IOS objectives are recommended for applications where violet or ultra-violet excitation is needed



## ACCESSORIES AND SPARE PARTS

### EYEPIECES

- BS.6010** HWF 10x/20 mm eyepiece, Ø 23.2 mm tube
- 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 BS.6010
- BS.6099-S** Pair of eyecups for BS.6012 and BS.6015

- BS.9647** Polarization polarizer Ø 6 mm for slider under bScope® head
- BS.9651** Polarization attachment for lamphouse of bScope® with 360° scale

### MISCELLANEOUS

- BS.9105** Swing-out Abbe condenser 0.9/1.25 NA
- BS.9170** Slider with darkfield stop for standard Abbe condenser with slot
- BS.9880** Köhler attachment
- BS.9993** NeoLED™ replacement unit
- AE.1370** Set of rechargeable batteries, three pieces
- SL.1385** 100 W HBO mercury vapor lamp for fluorescence

### OBJECTIVES

- 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
- 86.552** Plan Fluarex 10x/0.35 IOS objective. WD 2.9 mm
- 86.554** Plan Fluarex 20x/0.60 IOS objective. WD 1.5 mm
- 86.556** Plan Fluarex S40x/0.75 infinity corrected IOS objective. WD 0.6 mm
- 86.558** 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

### CAMERA ACCESSORIES

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

### DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil (25 ml). n = 1.482
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue/paper, brush, air blower, cotton swabs
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox

WD = working distance

For phase contrast equipment and accessories, see chapter 4 Life science, bScope®

### CONDENSERS

- BS.9102** Abbe condenser 1,25 NA with slot for darkfield and phase contrast sliders
- BS.9105** Swing-out Abbe condenser 0.9/1.25 NA

### POLARIZATION ATTACHMENTS

- BS.9660** Polarization kit: analyzer under head and polarizer on lamphouse



## 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 parfocal EIS objectives enable perfect observations and color rendering at high resolving power



● DX.3153-PLi



<b>DX.3153-PLi</b> 454 (h) x 260 (w) x 367 mm (d)   26 kg
<b>DX.3153-PLi/HAL</b> 454 (h) x 260 (w) x 480 mm (d)   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 parfocal plan EIS objectives
- 60 mm parfocal plan semi-apochromatic EIS objectives
- M25 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 beam splitter (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, standard with Ø 23.2 mm tube

### NOSEPIECE

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

### MOTORIZED MODEL

The Delphi-X Observer™ can be supplied with a motorized revolving sextuple reversed nosepiece together with a flip-down condenser. A precise step-motor allows the user to switch from objective by a simple push of a button. Another button allows quick switching between two preselected



● Tilting head

objectives. The electronics memorize automatically the light intensity levels for each objective after switching. The electronics also automatically flip-out the front lens of the flip-down condenser when the 4x objective is used

### 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 parfocal objectives and a 200 mm focal length tube lens. This tube lens reduces the angle of the light rays passing through the optics and as a direct result it significantly improves 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

### PLAN ACHROMATIC EIS OBJECTIVES

(clinical routine applications)

The Delphi-X Observer™ is 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

## OBJECTIVES

Plan PLi	2x/0.06*	4x/0.10	10x/0.25	20x/0.40	S40x/0.65	S50x/0.95 oil*	S60x/0.80*	S100x/1.25 oil	S100x/1.25 oil iris*
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 parfocal and have a M25 mounting thread, all optics are anti-fungus treated and anti-reflection coated for maximum light throughput and all S40x, S50x, S60x and S100x objectives are spring loaded

\*Optional

## PLAN SEMI-APOCHROMATIC 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. 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

## 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 six filter cubes and supplied with 100 W HBO mercury vapor light source for a broad powerful light spectrum

## DIASCOPIIC 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 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

## LIGHT INTENSITY MEMORY FUNCTION

The electronics memorize automatically the light intensity levels for each objective after switching. The electronics also automatically flip out the front lens of the flip-down condenser when the 4x objective is used. Optionally available, only for a new Delphi-X Observer

## 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

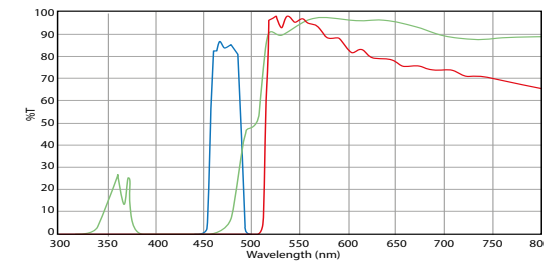
## ICARE SENSOR

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

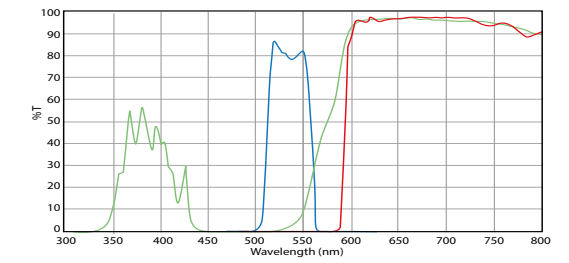
## STANDARD GENERAL PURPOSE FLUORESCENCE FILTER SETS

Supplied with standard fluorescence filter sets for blue excitation (EX460-490 DM500 EM520LP) and green excitation (EX510-550 DM570 EM590LP), UV shield and external power supply. Optional: fluorescence filter sets for UV excitation (EX330-385 DM400 EM420LP) and violet excitation (EX414-410 DM455 EM455LP)

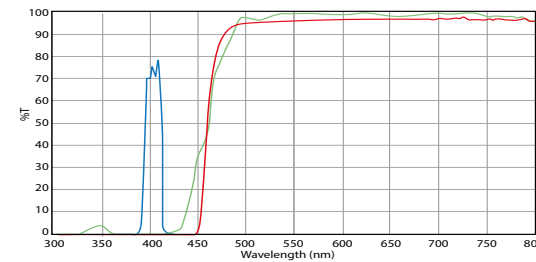
### BLUE EXCITATION (DX.9745)



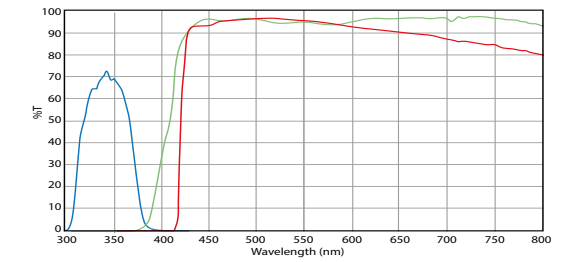
### GREEN EXCITATION (DX.9746)



### VIOLET EXCITATION (DX.9747)



### ULTRA-VIOLET EXCITATION (DX.9748)



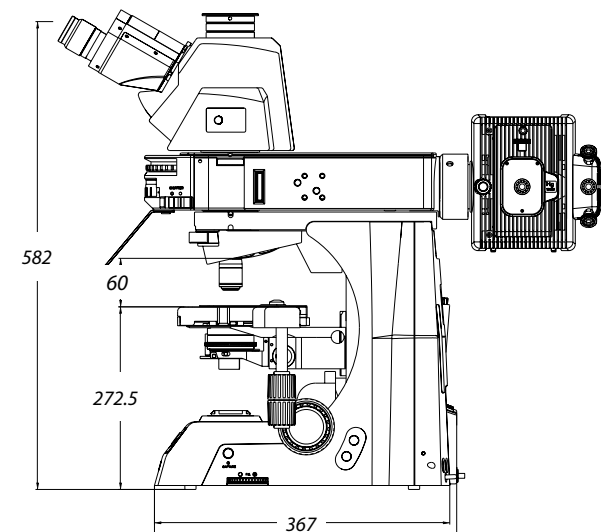
Other with more specific and optimized and application related fluorescence filter sets are also available

## 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 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	.			.		.

### FOR ORDERING MOTORIZED MODELS

Substitute the third digit "5" of the model reference with the digit "7". Example: DX.1173-PLi = DX.1153-PLi model but with motorized nosepiece, flip-down condenser and automatic light control

### FOR ORDERING LIGHT INTENSITY MEMORY FUNCTION ONLY

Substitute the third digit "5" of the model reference with the digit "8". Example: DX.1183-PLi = DX.1153-PLi model but with automatic light control

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

**DX.6010** Super wide field SWF 10x/25 mm eyepiece for Ø 30 mm tube

**DX.6010-CM** Super wide field SWF 10x/25 mm eyepiece with micrometer and crosshairs for Ø 30 mm tube

**DX.6210** Super wide field SWF 10x/22 mm eyepiece for Ø 30 mm tube

**DX.6210-CM** Super wide field SWF 10x/22 mm eyepiece with micrometer and crosshairs for Ø 30 mm tube

**DX.6210-SG** Super wide field SWF 10x/22 mm eyepiece with 20 x 20 square grid reticle. For Ø 30 mm tube

**DX.6012** Wide field WF 12.5x/17.5 mm eyepiece for Ø 30 mm tube

**DX.6015** Wide field WF 15x/16 mm eyepiece for Ø 30 mm tube

**DX.6020** Wide field WF 20x/12 mm eyepiece for Ø 30 mm tube

**DX.6099-L** Eyecup for eyepieces

### OBJECTIVES INFINITY EIS

**DX.7201** 60 mm plan PLi 1x/0.04 objective. WD 3.2 mm

**DX.7202** 60 mm plan PLi 2x/0.06 objective. WD 7.5 mm

**DX.7204** 60 mm plan PLi 4x/0.10 objective. WD 30 mm

**DX.7210** 60 mm plan PLi 10x/0.25 objective. WD 10.2 mm

**DX.7220** 60 mm plan PLi 20x/0.40 objective. WD 12 mm

**DX.7240** 60 mm plan PLi S40x/0.65 objective. WD 0.7 mm

**DX.7250** 60 mm plan PLi S50x/0.95 oil objective. WD 0.19 mm

**DX.7260** 60 mm plan PLi S60x/0.80 objectives. WD 0.3 mm

**DX.7200** 60 mm plan PLi S100x/1.25 oil immersion objective. WD 0.2 mm

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

**DX.7304** 60 mm plan semi-apochromatic PLi-apo Fluarex 4x/0.13 objective. WD 16.5 mm

**DX.7310** 60 mm plan semi-apochromatic PLi-apo Fluarex 10x/0.30 objective. WD 8.1 mm

**DX.7320** 60 mm plan semi-apochromatic PLi-apo Fluarex 20x/0.50 objective. WD 2.1 mm

**DX.7340** 60 mm plan semi-apochromatic PLi-apo Fluarex S40x/0.75 objective. WD 0.7 mm

**DX.7300** 60 mm plan semi-apochromatic PLi-apo Fluarex S100x/1.30 oil immersion objective. WD 0.15 mm

**DX.9850** C-mount with high resolution relay 0.50x objective for 1/2 inch C-mount camera

**DX.9863** C-mount with high resolution relay 0.63x objective for 2/3 inch C-mount camera

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

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

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

### MISCELLANEOUS

**DX.9660** Simple polarization kit

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

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

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

**DX.9961** 100 W 12 V halogen bulb (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

### MISCELLANEOUS

**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

**DX.9504-RS** Option\* for right handed stage with Sapphire glass

**DX.9504-LS** Option\* for left handed stage with Sapphire glass

**SL.1385** 100 W HBO mercury vapor lamp for fluorescence

\*Option mounted only on new Delphi-X Observer™ microscopes (resp. DX.xx5x-xxx/RS and DX.xx5x-xxx/LS)

### CONDENSERS

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

**DX.9110** Dry darkfield condenser

**DX.9112** Oil immersion darkfield condenser

### CAMERA ACCESSORIES

**DX.9810** C-mount with 1 magnification for C-mount camera

**DX.9835** C-mount with high resolution relay 0.35x objective for 1/3 inch C-mount camera

### DISPOSABLES

**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** Isopropyl alcohol 99%, 200 ml

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

WD = working distance



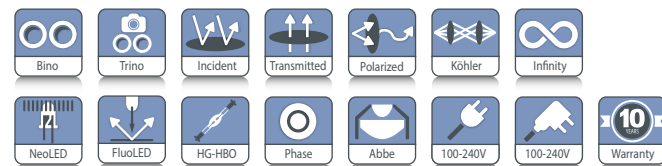
## Oxion fluorescence

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 a maximum of four filter cubes. The FluoLED 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 FluoLED wavelengths are also available. The Oxion fluorescence microscopes are dedicated to professionals in life science applications, laboratories of universities and research centers



OX.3085



## OX.3085

454 (h) x 276 (w) x 578 mm (d) | 12.2 kg

## OX.3230

454 (h) x 185 (w) x 294 mm (d) | 8.7 kg

## HIGHLIGHTS

- Binocular and trinocular models
- HWF 10x/22 mm eyepieces
- Reversed nosepiece for a maximum of five objectives
- Plan, plan Fluorex and plan semi apochromatic Fluorex 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 a maximum of four 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 supplied with 30° inclined tubes, interpupillary distance from 50 to 75 mm and two  $\pm 5$  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 a maximum of five 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 Fluorex 4x/0.10, 10x/0.25, S40x/0.65 and S100x/1.25 oil immersion IOS objectives



OX.3230

- Plan semi apochromatic Fluorex 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  $\mu$ m per graduation, 200  $\mu$ m per rotation, total travel range is approximately 28 mm. Supplied with an adjustable rack stop to prevent damage to sample and objectives. The coarse adjustments are equipped with friction control

## STAGE

150 x 140 mm stage with integrated 76 x 50 mm 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 (HBO)

Fluorescence attachment with 100 W (HBO) mercury vapor incident epi-illumination and rail for a maximum of four filter

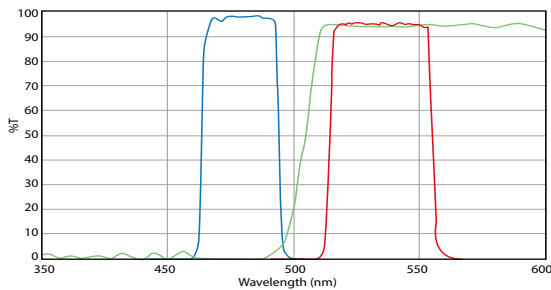
blocks. Two general purpose filter sets are supplied with the attachment: AE.3245 (blue excitation) and AE.3246 (green excitation). Two other general purpose filter sets AE.3248 (UV excitation) and AE.3247 (violet excitation) are also available  
*More specific filter sets are available on request*

## ILLUMINATION FOR FLUORESCENCE (LED)

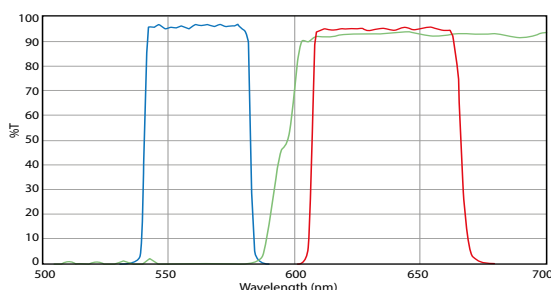
The FluoLED attachment is standard delivered with a **455 nm LED** (EX 425-475, DM 480, EM 485 LP filter set) for detection of tuberculosis with Auramine-O fluorochrome. FluoLED attachments with **365 nm LED** (EX 340-390, DM 400, EM 420 LP filter set, DAPI), **470 nm LED** (EX 450-490, DM 495, EM 500-525 filter set, FITC/GFP/eGFP) and **560 nm LED** (EX 540-580, DM 585, EM 608-690 filter set, TexasRed) are also available

## PACKAGE CONTENT

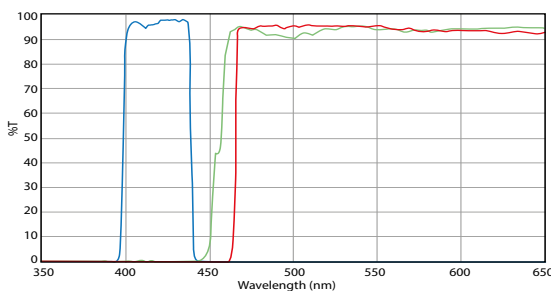
Supplied with power cord, dust cover, white filter, user manual and 5 ml immersion oil for models with S100x objective. All packed in a polystyrene box



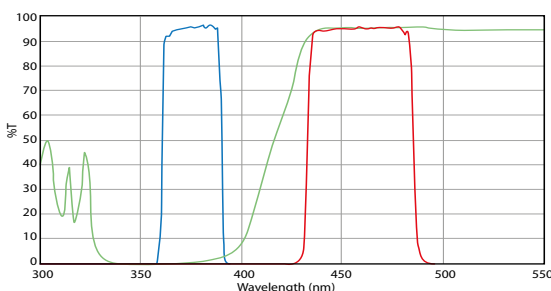
● AE.3245 (Blue EX 465-495 nm DM 505 nm EM 515-558 nm)



● AE.3246 (Green EX 540-580 nm DM 600 nm EM 605-665 nm)



● AE.3247 (Violet EX 410-440 nm DM 455 nm EM 465 nm LP)



● AE.3248 (UV EX 361-389 nm DM 415 nm EM 435-485 nm)

MODELS	Binocular	Trinocular	Plan 4x/10x/ S40x/S100x objectives	Plan Fluarex 4x/10x/ S40x/S100x objectives	Plan semi apo Fluarex 4x/10x/S40x/ objectives	Plan semi apo Fluarex 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

### EYEPIECES

**AE.3210** HWF 10x/22 mm eyepiece

**AE.3215** HWF 15x/13 mm eyepiece

**AE.3223** HWF 10x/22 mm eyepiece with 10 mm/100 micrometer

**AE.3225** Pair of eyecups

**AE.3152** Plan semi apochromatic Fluarex S40x/0.75 IOS objective. WD 0.6 mm

**AE.3156** Plan semi apochromatic Fluarex S100x/1.28 oil immersion IOS objective. WD 0.21 mm

### OBJECTIVES

**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 Fluarex 4x /0.15 IOS objective. WD 21.6 mm

**86.552** Plan Fluarex 10x/0.35 IOS objective. WD 2.9 mm

**86.554** Plan Fluarex 20x/0.60 IOS objective. WD 1.5 mm

**86.556** Plan Fluarex S40x/0.75 infinity corrected IOS objective. WD 0.6 mm

**IS.7400** Plan Fluarex PLFi S100x/1,30 IOS infinity corrected objective. 0.17 mm cover glass correction. WD 0.13 mm

**AE.3144** Plan semi apochromatic Fluarex 4x/0.13 IOS objective. WD 18.5 mm

**AE.3146** Plan semi apochromatic Fluarex 10x/0.30 IOS objective. WD 10.6 mm

**AE.3148** Plan semi apochromatic Fluarex 20x/0.50 IOS objective. WD 2.33 mm

### FLUORESCENCE FILTER SETS

**AE.3245** Fluorescence block with general purpose filter set for blue excitation (EX 465-495 nm DM 505 nm EM 515-558 nm). Excellent for FITC, eGFP. Compatible for 5-carboxyfluorescein (5-FAM), Alexa fluor 488, BODIP-FL, Calcein, Cy2, eGFP, FITC, Fluo-4, Fluor-Jade, FluorX, Mito tracker Green, Rhodamine 110, Spectrumgreen 110

**AE.3246** Fluorescence block with general purpose filter set for green excitation (EX 540-580 nm DM 600 nm EM 605-665 nm). Excellent for Texas Red, Alexa 594, 5-Carboxynaphthofluorescein. Other compatible fluorophores: 5-CNF, 5-ROX (carboxy-X-rhodamine), Alexa Fluor 568, Alexa Fluor 594, Cy3.5, Lissamine rhodamine B, Mito Tracker Red, mPlum mRaspberry, Rhodamine Red, SpectrumRed, Texas Red, X-Rhodamine (XRITC)

**AE.3247** Fluorescence block with general purpose filter set for violet excitation (EX 410-440 nm DM 455 nm EM 465 nm LP). Compatible fluorophores: Cerulean, CFP, SpectrumAqua

WD = working distance

# about fluorescence

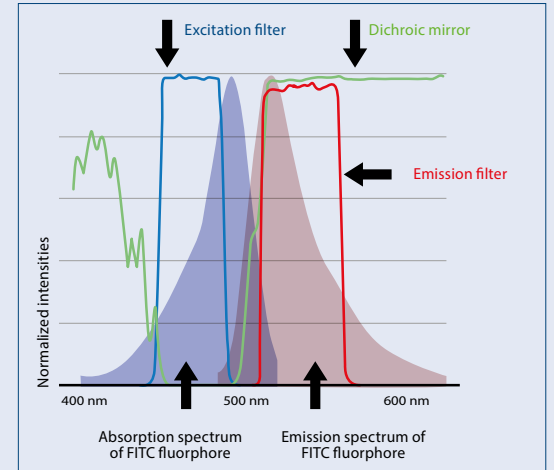
It took many years - since the discovery by Osamu Shimomura of the first proteins aequorin and green fluorescent protein (GFP) in the bioluminescent jellyfish *Aequorea Victoria* around the sixties - to develop a specific fluorescence microscope for live-cell imaging which permits essential progress 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

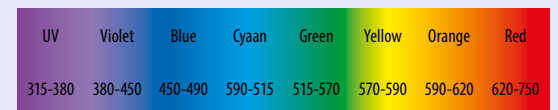
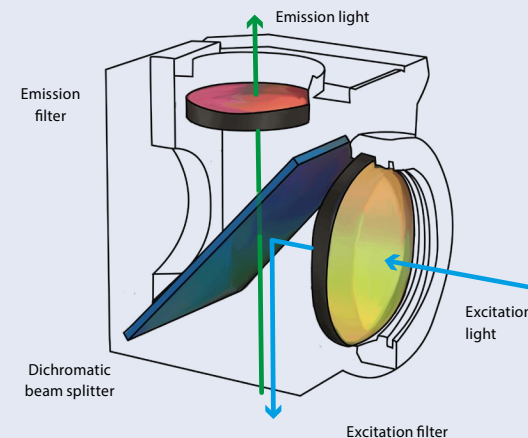
## DESIGN OF A FLUORESCENCE MICROSCOPE

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 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 (beam splitter) and the emission filter. The filtered excitation light is further reflected by the dichroic mirror through the objectives towards the sample

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.3248** Fluorescence block with general purpose filter set for UV excitation (*UV EX 361-389 nm DM 415 nm EM 435-485 nm*). Compatible fluorophores: 7-amino-4-methylcoumarin, 7-Hydroxy-4-methylcoumarin (pH9), Alexa Fluor 350, AMCA, AMCA-X, Calcein Blue, Calcein White, Cascade Blue, DAPI, Hoechst 33342 & 33258, LysoSensor Blue (pH5), Lyso Tracker Red, marina Blue, Spectrum Blue
- AE.3249** Empty filter cube for models OX.3066/OX.3067/OX.3070/3075/3080/3085

## POLARIZATION ATTACHMENTS

- AE.3190** Polarizer/analyzer set
- AE.3192** Polarizer slider for nosepiece
- AE.3194** Polarizer for lamphouse

## FILTERS

- AE.3196** Frosted white filter 45 mm, to be mounted on lamphouse
- AE.3198** Blue filter 45 mm, to be mounted on lamphouse
- AE.3200** Yellow filter 45 mm, to be mounted on lamphouse
- AE.3202** Green filter 45 mm, to be mounted on lamphouse

## CAMERA ACCESSORIES

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

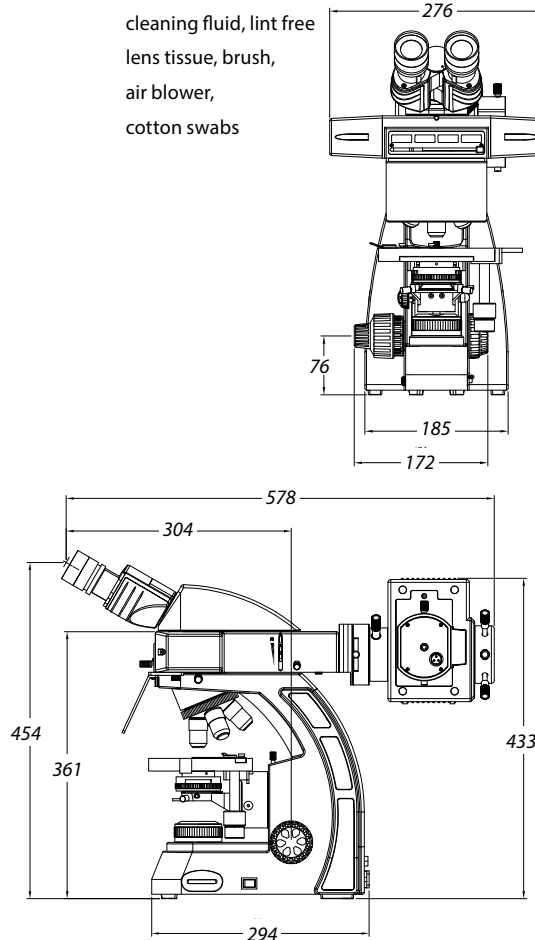
## MISCELLANEOUS

- AE.5168-O** Heating stage and temperature controller up to 50°C. Only with new microscopes
- SL.1385** 100 W HBO mercury vapor lamp for fluorescence

- SL.5510** NeoLED™ replacement unit for Oxion
- AE.3199** Glass fuses 3.15 A 250 V, 10 pieces

## DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pcs
- 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 pcs
- 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





- Life science applications
- Observation of tissue cultures, living cells
- Brightfield and phase contrast 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

OX.2253-PLPHF

**Oxion Inverso**  
fluorescence

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

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



OX.2453-PLPHF



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 AND FLUORESCENCE MICROSCOPY

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

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

OBJECTIVES FOR PHASE CONTRAST AND FLUORESCENCE MICROSCOPY

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

Infinity color corrected long working distance plan Fluorex 10x/0.30 and plan phase Fluorex 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*

ICSI SET

Micromanipulator with two 3D hydraulic joysticks for Intracytoplasmic sperm injection is available for the Oxion Inverso fluorescence. See chapter 4



OXION FLUORESCENCE OX.2453-PLPHF  
488 (h) x 230.5 (w) x 728 mm (d) | 14.3 kg

## STAGE

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

- Stage extension plate
- Metal insert for Ø 65 mm cell culture dish or Multiwell
- Metal insert for 76 x 26 mm slides and 54 mm cell dish (only for models with X-Y stage)
- Glass insert with Ø 30 mm hole
- Optional universal cell culture holder



● Accessories supplied with models with mechanical stage

## CONDENSER

N.A. 0.30 condenser with iris diaphragm.

Working distance 72 mm

The models for the phase contrast OX.2253-PLPHF and OX.2453-PLPHF are supplied 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, Ø 45 mm

## STANDARD FLUORESCENCE FILTERS

(for fluorescence models)

The fluorescence models OX.2253-PLF and OX.2253-PLPHF are come with two filter sets for excitation:

- In the blue spectrum,  
OX.9745, EX465-495 (BP) DM505 (LP) EM515-558 (BP)
- In the green spectrum,  
OX.9746, EX540-580 (BP) DM600 (LP) EM605-665 (BP)

The fluorescence models OX.2453-PLF and OX.2453-PLPHF equipped with a 4-positions filter rail are supplied 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, EX540-580 (BP) DM600(LP) EM605-665 (BP)
- In the UV spectrum,  
OX.9747, EX361-381 (BP) DM415 (LP) EM435-495 (BP)

## PACKAGE CONTENT

Supplied with metal insert with Ø 25 mm hole, metal insert for Ø 35 mm cell culture dish, blue LBD and green 550 nm interference Ø 45 mm filter, power cord, dust cover and user manual. Phase contrast models are supplied with 4x/10x and 20x/40x phase contrast annuli in slider, green filter and alignment telescope



● Standard accessory

MODELS	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.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

### PLAN FLUAREX OBJECTIVES FOR BRIGHTFIELD AND FLUORESCENCE<sup>(1)</sup>

- OX.8604** PL FL LWD 4x/0.13 IOS objective, WD 18.5 mm
- OX.8610** PL FL LWD 10x/0.30 IOS objective, WD 7.1 mm
- OX.8620** PL FL LWD 20x/0.45 IOS objective, WD 5.91 mm
- OX.8640** PL FL LWD 40x/0.65 IOS objective, WD 1.61 mm
- OX.8660** PL FL LWD 60x/0.75 IOS objective, WD 1.04 mm

### OBJECTIVES FOR FLUORESCENCE AND PHASE CONTRAST<sup>(1) (2) (3)</sup>

- OX.8720** Plan phase Fluarex LWD 20x/0.45 infinity corrected IOS objective. WD 5.91 mm<sup>(1)</sup>
- OX.8740** Plan phase Fluarex LWD 40x/0.65 infinity corrected IOS objective. WD 1.1 mm<sup>(1)</sup>

<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

<sup>(3)</sup> Phase contrast objectives require slider with phase contrast annuli OX.9163

All optical parts are anti-fungus treated

### 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

### PHASE CONTRAST ATTACHMENTS

- 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

### CAMERA ACCESSORIES

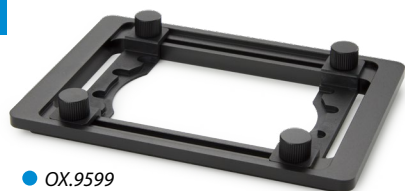
- OX.9810** C mount with 1.0x objective
- OX.9833** C-mount adapter with 0.33x objective for Oxion microscopes and 1/3" cameras
- OX.9850** C-mount adapter with 0.5x objective for Oxion and Oxion Inverso microscopes and 1/2" cameras
- AE.5120-2** Trinocular 23.2 mm tube for Oxion photo port revision-2

WD = working distance

- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Needs T2 adapter and AE.5120 or AE.5120-2
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras

### STAGES AND HOLDERS

- OX.9500** Mechanical coaxial X-Y 120 x 78 mm stage
- OX.9506** Transparent glass insert with  $\varnothing$  30 mm hole
- OX.9508** Metal insert with  $\varnothing$  25 mm hole
- OX.9510** Metallic insert for  $\varnothing$  65 mm cell culture dish and Multiwell
- OX.9512** Metal insert with 76 x 26 mm slide holder and  $\varnothing$  55 mm cell culture dish holder
- OX.9535** Metal insert for  $\varnothing$  35 mm cell culture dish holder
- OX.9550** Stage extension plate
- OX.9599** Universal cell culture dish holder



- OX.9599

- AE.8010** Heating stage with transparent glass plate for AE.8000 Micromanipulator, including digital temperature controller

### MICROMANIPULATOR ATTACHMENT

- AE.8000** Micromanipulator for intracytoplasmic sperm injection (ICSI) suitable for the Oxion Inverso inverted microscope

### MISCELLANEOUS

- OX.9700** Blue filter  $\varnothing$  45 mm
- OX.9985** 5 W NeoLED™ replacement unit
- AE.3199** Glass fuses 3.15 A 250 V packed, per 10 pieces
- SL.1385** 100 W HBO mercury vapor lamp for fluorescence
- OX.9703** IR cut-off filter
- OX.9749** Empty filter block

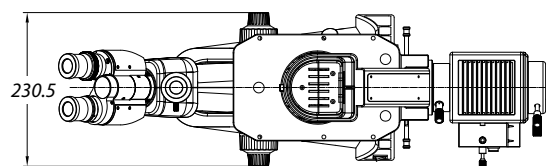
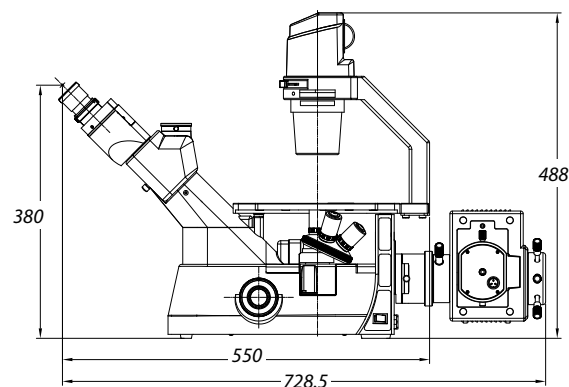
- OX.9753** Filter block rail, three positions, without filters
- OX.9754** Filter block rail, four positions, without filters



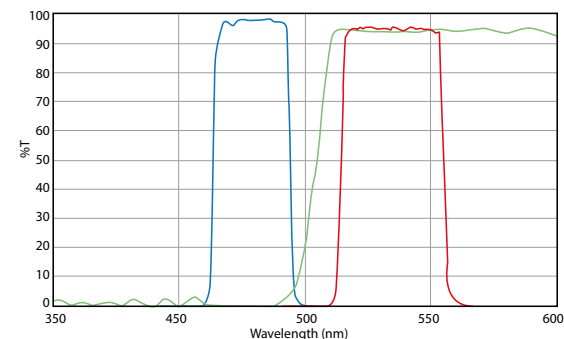
- Accessories supplied with phase contrast models

### DISPOSABLES

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil,  $n = 1.482$  (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

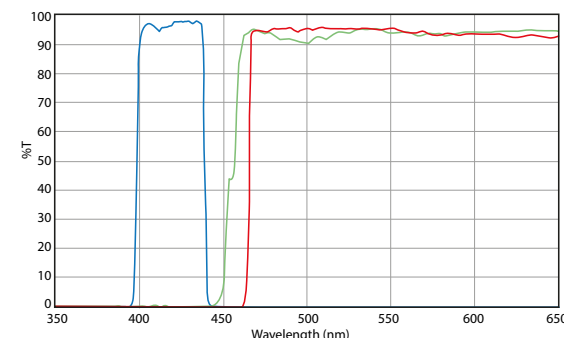


### STANDARD GENERAL PURPOSE FLUORESCENCE FILTER SETS



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

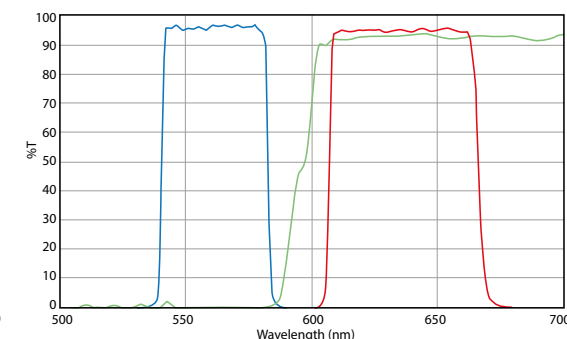
Also suitable for: Acridine Orange + DNA, Alexa Fluor 488™, Atto 488, Azami Green, BODIPY FL/pH7.2, Calcein, Calcium Green™-1, Cy2™, DiO, DyLight 488, EGFP, Emerald GFP, FAM, FITC, Fluo-4, GFP LysoTracker Green/pH 5.2, MitoTracker Green FM/MeOH, mWasabi, Oregon Green™ 488, SYBR® Green I, SYTO 9/DNA,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



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

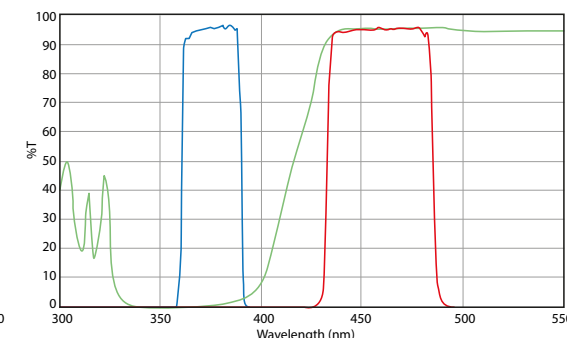
Also suitable for: Alexa Fluor 350™, Biosearch Blue, Coumarin, DAPI, DyLight 350, Hoechst 33258, LysoTracker Blue/MeOH

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



- **OX.9746 Green excitation 540-580 nm**  
Texas Red / mCherry / Alexa Fluor 594  
EX540-580 (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)

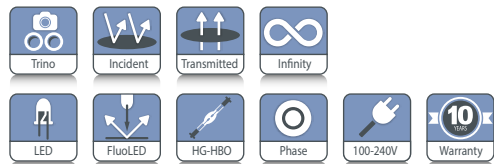


## Delphi-X Inverso fluorescence

The Delphi-X Inverso™ for fluorescence is an inverted microscope for the professional who needs to observe tissues or cells stained with fluorescence dyes. Super contrast semi-apochromatic Fluarex™ objectives with collar adjustment ring assure perfect observation of cells or tissues in 1.2 mm thick Petri dishes or flasks



● DI.3053-PLPHFi



PHASE CONTRAST FLUORESCENCE DI.1053-PLPHFi  
665 (h) x 276 (w) x 800 mm (d) | 36.0 kg

## HIGHLIGHTS

- Life science applications
- Observation of fluorescence in tissues and cells
- Brightfield, phase contrast fluorescence observations
- DIC (differential interference contrast)
- Long working distance IOS plan semi-apochromatic Fluarex achromatic objectives
- Revolving quintuple nosepiece
- 10 W LED or 100 W halogen reflected illumination
- 100 W HBO mercury vapor transmitted fluorescence illumination
- Backwards tilting condenser arm
- Easy placement of large objects
- 10 Years warranty



● Filter cubes with fluorescence filters

## SPECIFICATIONS

### EYEPIECES

Pair of DIN HWF plan 10x/25 mm or 10x/22 mm eyepieces with diopter adjustment

### HEAD

Trinocular 45° inclined tubes. Interpupillary distance of 47 to 78 mm. Trinocular head with 100-0, 80/20 and 0/100 positions

### NOSEPIECE

Revolving sextuple nosepiece on ball-bearings

### OBJECTIVES

High numerical infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi 10x/0.30, 20x/0.45, S40x/0.60 IOS objectives enable the sub-cellular structures. An optional 60x/0.80 IOS objective is also available. The 20x, S40x and optional S60 objectives are equipped with collar adjustment ring for glass thicknesses from 0 to 1.2 mm. Fluarex™ objectives are made of low-absorption glass. Fluarex™ is a trademark of Euromex microscopen bv. All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

### STAGE

Stage 340 x 230 mm, equipped with a coaxial mechanical

130 x 85 mm X-Y stage. Supplied with:

- Metal insert for O 38 mm cell culture dish
- Metal insert for O 54 mm cell culture dish or 76 x 26 mm slides
- Metal insert for Multiwell plates (127.76 x 85.48 mm)
- Metal insert for Teraski plates (83.3 x 58.0 mm)
- Optional universal cell culture holder

### CONDENSER

Rotating N.A. 0.55 condenser with iris diaphragm. Working distance 26 mm. Supplied with phase contrast annuli for 10x/20x, 40x and 60x objectives and the DIC prisms for the 10x/20x/40x and 60x objectives. Three filter holders allow the insertion of Ø 38 mm filters in the optical path. The arm with condenser can be tilted backwards for convenient access to the stage. This allows easy placement of large objects like flasks and Petri dishes

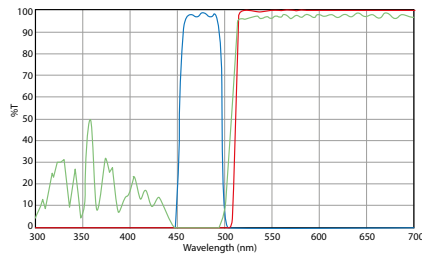
### LENS CHANGER

A lens changer with a 1.5x lens allow intermediary magnifications of 1.5 times the standard objective magnifications. Switching from 20x to 30x or 40 to 60 and from 60x to 90x magnification can be done without the need to re-focus on the sample

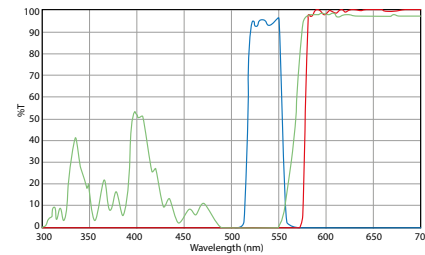
## FLUORESCENCE ATTACHMENT

The Delphi-X Inverso for fluorescence microscopy is supplied with a 6-position fluorescence filter set wheel and comes

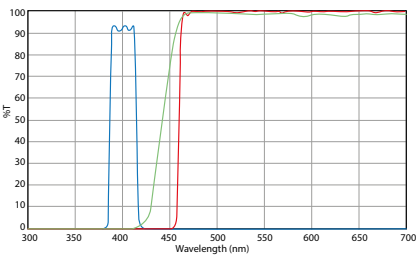
with two fluorescence filter sets for blue and green excitation. Other filter sets are optional



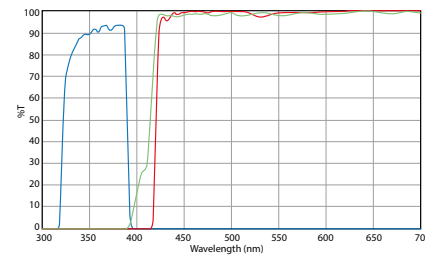
- **DI.9745 Blue excitation**  
EX 460-495 DM 505 EM 510 long pass



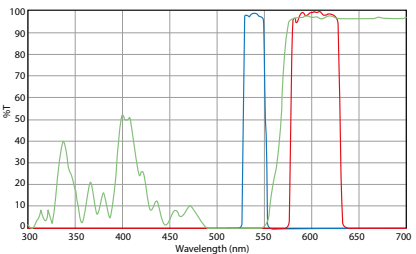
- **DI.9746 Green excitation**  
EX 510-550 DM 570 EM 575 long pass



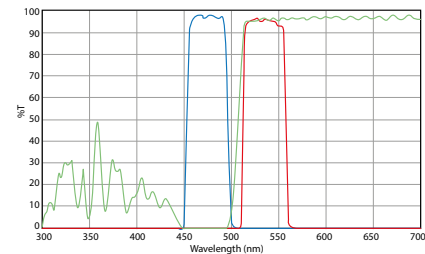
- **DI.9747 Violet excitation**  
EX 400-410 DM 455 EM 460 Long pass



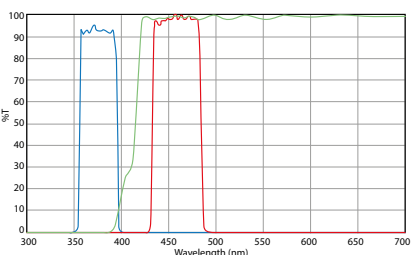
- **DI.9748 Ultra violet excitation**  
EX 330-385 DM 410 EM 420 Long pass



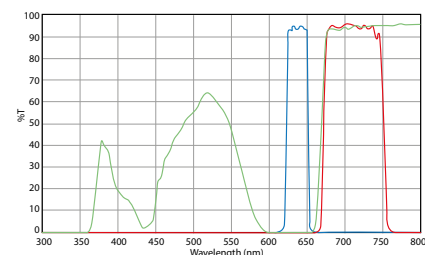
- **DI.9750.TRITC Green excitation**  
EX 528-553 DM 565 EM 578-633 band pass



- **DI.9750.FITC Blue excitation**  
EX 460-495 DM 505 EM 510-550 band pass



- **DI.9750.DAPI UV excitation**  
EX 360-390 DM 415 EM 435-485 band pass



- **DI.9750.R Red excitation**  
EX 620-650 DM 660 EM 670-750 band pass

## FOCUSING ADJUSTMENT

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

## ILLUMINATION

Incident illumination with a 100 W mercury vapor lamp with external 100-240 V power supply. Transmitted 3 W LED or 100 W halogen illumination and internal power supply. Fuse holder 3.15 A / 250 V

## PACKAGE CONTENT

Supplied with metal insert for Ø 38 mm cell culture dish and a metal insert for Ø 54 mm cell culture dish with 76 x 26 mm slides, metal insert for Multiwell plates, metal insert for Teraski plates, blue and green interference Ø 45 mm filters, power cord, dust cover, green filter and alignment telescope and user manual

## MODELS

	10x/20x/40x PLPHFi objectives	100 W Halogen reflected illumination	10 W LED illumination	100 W HBO fluorescence transmitted illumination
DI.3053-PLPHFi	•		•	•
DI.3053-PLPHFi/HAL	•	•		•



- 6-Position fluorescence filter set wheel and 1.5 lens changer

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

- **DI.6010** Super wide field SWF 10x/25 mm eyepiece
- **DI.6010-C** Super wide field SWF 10x/25 mm eyepiece with crosshairs
- **DI.6010-M** Super wide field SWF 10x/25 mm eyepiece with micrometer
- **DI.6010-CM** Super wide field SWF 10x/25 mm eyepiece with micrometer and crosshairs
- **DI.6010-SG** Super wide field SWF 10x/25 mm eyepiece with 20 x 20 square grid reticle
- **DI.6012** Wide field WF 12.5x/17.5 mm eyepiece
- **DI.6015** Wide field WF 15x/16 mm eyepiece
- **DI.6020** Wide field WF 20x/12 mm eyepiece
- **DI.6099-L** Eyecups for eyepiece

### OBJECTIVES

- **DI.8710** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi 10x/0.30, IOS objective PLPHi 10x/0.30 objective. WD 10.2 mm
- **DI.8720** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi 20x/0.45 objective. WD 7.5 to 8.8 mm
- **DI.8740** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi S40x/0.60 IOS objective. WD 3 to 4.4 mm
- **DI.8760** Infinity semi-apochromatic long working distance plan phase Fluarex PLPHFi S60x/0.70 IOS objective. WD 1.8-2.6 mm

**DIFFERENTIAL INTERFERENCE CONTRAST**

- DI.9690** Rotating DIC and BF disc condenser without DIC prisms for life science Delphi-X Inverso models. Needs one or more DIC-prisms (DI.9660-xx),
- DI.9690-10** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models.
- DI.9690-20** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models.
- DI.9690-40** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models.
- DI.9690-60** DIC prism for rotating disc condenser (DI.9690) for life science Delphi-X Inverso models.
- DI.9693-10** DIC insert with small prism to be used with 10x objective DI.8710
- DI.9693-20** DIC insert with small prism to be used with 20x objective DI.8720
- DI.9693-40** DIC insert with small prism to be used with 40x objective DI.8740
- DI.9693-60** DIC insert with small prism to be used with 60x objective DI.8760

**STANDARD GENERAL PURPOSE  
FLUORESCENCE FILTER SETS****Long pass type:**

- DI.9745** Fluorescence filter block for blue excitation with excitation at 460 to 495 nm, dichroic mirror at 505 nm and emission long pass filter from 510 nm
- DI.9746** Fluorescence filter block for green excitation with excitation at 510 to 550 nm, dichroic mirror at 570 nm and emission long pass filter from 575 nm
- DI.9747** Fluorescence filter block for violet excitation with excitation at 400 to 410 nm, dichroic mirror at 455 nm and emission long pass filter from 460 nm
- DI.9748** Fluorescence filter block for ultra violet excitation with excitation at 330 to 385 nm, dichroic mirror at 410 nm and emission long pass filter from 420 nm

**Band-pass type****DI.9750.TRITC**

Fluorescence filter block for blue excitation with excitation at 528 to 553 nm, dichroic mirror at 565 nm and emission band pass filter at 578 to 633 nm. Suitable for TRTIC

**DI.9750.FITC**

Fluorescence filter block for green excitation with excitation at 460 to 495 nm, dichroic mirror at 505 nm and emission band pass filter at 510 to 550 nm. Suitable for FITC

**DI.9750.DAPI**

Fluorescence filter block for ultraviolet excitation with excitation at 360 to 390 nm, dichroic mirror at 415 nm and emission band pass filter at 435 to 485 nm. Suitable for DAPI

**DI.9750.RED**

Fluorescence filter block for red excitation with excitation at 620 to 650 nm, dichroic mirror at 660 nm and emission band pass filter at 670 to 750 nm.

**CAMERA ACCESSORIES**

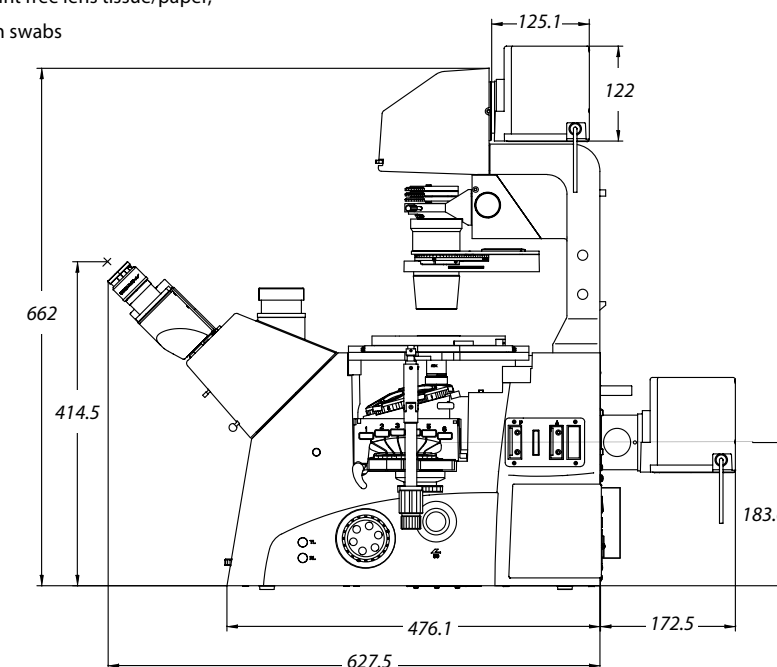
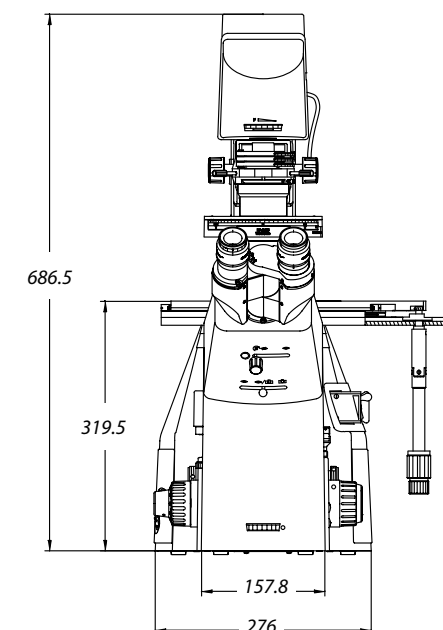
- DI.9810** C-mount with 1x magnification for C-mount camera
- DI.9835** C-mount with high resolution relay 0.35x objective for 1/3 inch C-mount camera
- DI.9850** C-mount with high resolution relay 0.50x objective for 1/2 inch C-mount camera
- DI.9863** C-mount with high resolution relay 0.63x objective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

**MISCELLANEOUS**

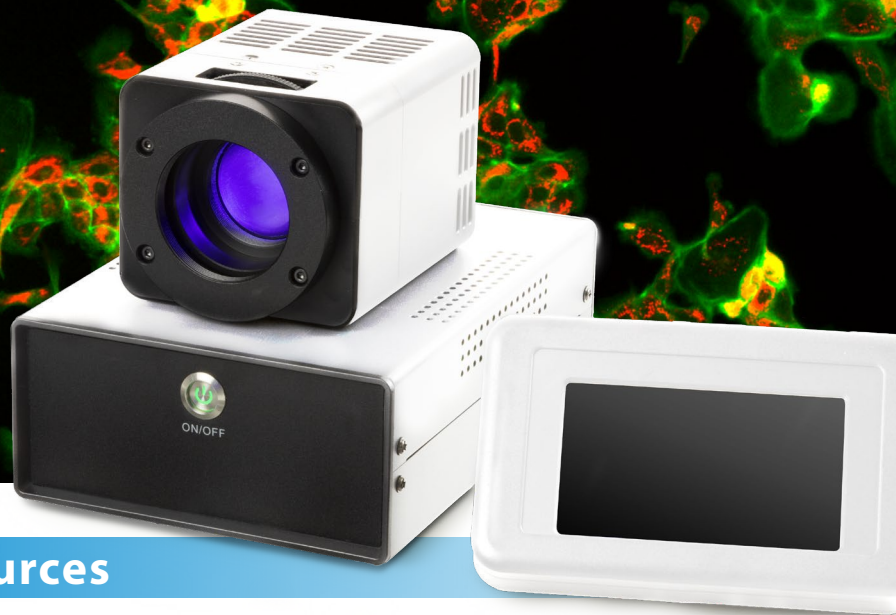
- DI.9961** 100 Watt 12 V halogen bulb
- DI.9997** 10 Watt LED replacement
- DI.9997-R** 10 Watt LED replacement for reflected illumination
- AE.5214** 500 mA 250 V fuses for LED models, 10pcs
- AE.5216** 5 A 250 V fuses for halogen models, 10pcs
- SL.1385** 100 W HBO mercury vapor lamp for fluorescence

**DISPOSABLES**

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces per pack
- PB.5157-W** Microscope slides 76 x 26 mm, ground edges and frosted side white color, 50 pieces per pack
- PB.5157-B** Microscope slides 76 x 26 mm, ground edges and frosted side blue color, 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** Isopropyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs







LE.6500 ●

## LED light sources

for fluorescence

Euromex offers three high-end and extremely easy-to-use LED light sources for fluorescence applications that can replace mercury vapor HBO light sources of our microscope solutions for fluorescence

The standard - entry-level - LED light source for fluorescence LE.6200, fits the two common Blue (450-490 nm) and Green (505-545 nm) wavelength bands for fluorescence excitation. Other bands are also possible, see model block

The standard LE.6500 LED light source for fluorescence fits five wavelengths bands for fluorescence excitation, one for ultra violet, two for the green and two for the blue light spectrum. Other bands are also possible, see model block



## HIGHLIGHTS

- Stand-alone operation
- Easy mounting and operation
- 9 excitation wavelengths-bands are available
- 2 years warranty

The ultimate LED light source for fluorescence LE.6900 fits all nine available wavelength bands for fluorescence, ranging from 330 to 670 nm



Keyboard pad of the LE.6900 ●

LAMPHOUSE	95 (h) x 85 (w) x 130 (d)   1.30 kg
CONTROLLER	75 (h) x 150 (w) x 205 (d)   0.90 kg
TOUCH SCREEN	95 (h) x 155 (w) x 36 (d)   0.25 kg

## SPECIFICATIONS

### LAMPHOUSE

The lamphouse can be mounted with a specific adapter on a Euromex Delphi-X Observer, iScope and Oxion upright microscopes as well as for our Oxion Inverso and Delphi-X Inverso inverted models. For other brands, contact Euromex

The standard LE.6500 system has a 100-240 V power supply/intensity control unit with touch screen for selection and intensity adjustment of five wavelength bands

### CONTROLLERS

The entry-level LE.6200 system has a simple 100-240 V power supply/intensity control unit for both wavelengths which are active at the same time

The ultimate LE.6900 system has a 100-240 V power supply/intensity control unit with keyboard pad for selection and intensity adjustment of all nine wavelength bands

### LE.6200

Band	Wavelength	FWHM (nm)	Range	Color	Power (mW)
5	470	24	450-490	Blue	315
6	525	29	505-545	Green	142

Customized versions with two wavelength bands (LE.6200 + 2 band references) - to choose between wavelength bands 1, 3, 4, 5 or 6 - are available on special request. E.g. LE.6200-15

### LE.6500

Band	Wavelength	FWHM (nm)	Range	Color	Power (mW)
1	365	18	330-380	Ultra violet	205
4	450	26	440-470	Royal blue	485
5	470	24	450-490	Blue	315
6	525	29	505-545	Green	142
7	545	116	510-560	Emerald green	172

Customized versions (product nr. LE.6500-ABCDE) with a maximum of five wavelength bands are available on special request. One can choose from wavelength bands 1 to 7 (see table below), e.g. LE.6500-12456

Customized versions (product nr. LE.6500-ABCD) with wavelength band 8 or 9 (not both) plus three other wavelength bands (chosen freely from wavelength bands 1 to 7, see table below) are also available. E.g. LE.6500-1458

### LE.6900

Band	Wavelength	FWHM (nm)	Range	Color	Power (mW)	E.g. compatible fluorochromes
1	365	18	330-380	Ultra violet	205	DAPI (359 nm), Biosearch Blue (352 nm), Calcofluor White (350 nm)
2	385	14	370-395	Royal violet	126	Coumarin (384 nm), FluoroGold (390 nm), wtGFP (395 nm)
3	405	22	380-420	Violet	468	DyLight 405 (399 nm)
4	450	26	440-470	Royal blue	485	Auramine (460 nm)
5	470	24	450-490	Blue	315	Cy2 (489 nm), rsGFP (488 nm), EGFP (488 nm), FITC (494 nm), Acridine Orange (DNA -500 nm)
6	525	29	505-545	Green	142	Citrine (514 nm), Acridine Orange (500 nm)
7	545	16	510-560	Emerald green	172	TRITC (555 nm), Cy3 (552 nm), DsRed (557 nm), Alexa Fluor 546 (556 nm)
8	625	20	605-650	Orange-Red	130	Cy5 (649nm), Alexa Fluor 633 (632 nm)
9	660	21	645-670	Red	221	Cy5 (649nm), Alexa Fluor 647 (649 nm)

# FLUORESCENCE FILTER SETS

For ordering a specific fluorescence filter set find the fluorochrome you need and add the filter set reference 'xxxx' as follows:

## FOR ISCOPE:

IS.9750.xxxx/6, iScope® with 6-position fluorescence attachment, needs also empty block IS.9749/6  
 IS.9750.xxxx/3 iScope® with 3-position fluorescence attachment, needs also empty block IS.9749/3

## FOR BSCOPE:

BS.9750.xxxx, bScope® with 4-positions fluorescence attachment, needs also empty block BS.9749

### EXAMPLE:

*the reference for the bScope®  
 with a 39001 filter set is BS.9750.39001*

## FOR DELPHI-X OBSERVER/INVERSO:

DX.9750.xxxx, Delphi-X Observer™ with 6-position fluorescence attachment, needs also empty block DX.9749/6  
 DI.9750.xxxx, Delphi-X Inverso™ with 6-position fluorescence attachment, needs also empty block DI.9749/6

## FOR OXION SERIES:

OX.9750.xxxx Oxion inverso with 3-position fluorescence attachment, needs also empty block OX.9749/3  
 OX.9750.xxxx Oxion inverso with 4-positions fluorescence attachment, needs also empty block OX.9749/4  
 AE.3250.xxxx, Oxion upright with 4-positions fluorescence attachment, needs also empty block AE.3249



● AE.3248

**Acridine Orange DNA** - EX: 500 nm EM: 526 nm  
 EX: **465-495** nm DM 505 nm EM: **590-650** nm • **39009**

**Alexa Fluor 514™** - EX: 517 nm EM: 539 nm  
 EX: **485-505** nm DM 515 nm EM: **525-555** nm • **39003**

**Alexa Fluor 546™** - EX: 556 nm EM: 573 nm  
 EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**Alexa Fluor 555™** - EX: 553 nm EM: 568 nm  
 EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**Alexa Fluor 568™** - EX: 578 nm EM: 603 nm  
 EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**Alexa Fluor 594™** - EX: 590 nm EM: 617 nm  
 EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**Alexa Fluor 647™** - EX: 649 nm EM: 666 nm  
 EX: **595-645** nm DM 655 nm EM: **665-715** nm • **39007**

**AmCyan** - EX: - 458 nm EM: 489 nm  
 EX: **425-445** nm DM 455 nm EM: **465-495** nm • **39001**

**Auramine longpass** - EX: 460 nm EM: 550 nm  
 EX: **425-475** nm DM 485 nm EM: **495 LP** • **19008**

**Azami Green** - EX: 492 nm EM: 505 nm  
 EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Biosearch Blue** - EX: 352 nm EM: 447 nm  
 EX: **347-403** nm DM 415 nm EM: **410-510** nm • **39000**

**BODIPY FL/pH7.2** - EX: 505 nm EM: 512 nm  
 EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**CAL Fluor® Red 590** - EX: 569 nm EM: 591 nm  
 EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**CAL Fluor® Red 610** - EX: 590 nm EM: 610 nm  
 EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**Calcein** - EX: 494 nm EM: 517 nm  
 EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Calcium Green™-1** - EX: 506 nm EM: 531 nm  
 EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Calcofluor White** - EX: 350 nm EM: 475 nm  
 EX: **361-389** nm DM: 415 nm EM: **435** nm (LP) • **19000**

**Cerulean** - EX: 433 nm EM: 475 nm  
 EX: **425-445** nm DM 455 nm EM: **465-495** nm • **39001**

**CFP** - EX: 433 nm EM: 475 nm  
 EX: **425-445** nm DM 455 nm EM: **465-495** nm • **39001**

**Citrine** - EX: 514 nm EM: 529 nm  
 EX: **485-505** nm DM 515 nm EM: **525-555** nm • **39003**

**Coumarin** - EX: 384 nm EM: 470 nm  
 EX: **390-420** nm DM: 440 nm EM: **450** nm (LP) • **19011**

**Cy2™** - EX: 489 nm EM: 506 nm  
 EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Cy3.5™** - EX: 581 nm EM: 598 nm  
 EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**Cy3™** - EX: 552 nm EM: 570 nm  
 EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**Cy5™** - EX: 649 nm EM: 670 nm  
 EX: **595-645** nm DM 655 nm EM: **665-715** nm • **39007**

**DAPI** - EX: 359 nm EM: 461 nm  
 EX: **347-403** nm DM 415 nm EM: **410-510** nm • **39000**

**Draq5** - EX: 647 nm EM: 683 nm  
 EX: **595-645** nm DM 655 nm EM: **665-715** nm • **39007**

**DsRed** - EX: 557 nm EM: 584 nm  
 EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**DyLight 350** - EX: 352 nm EM: 435 nm  
 EX: **347-403** nm DM 415 nm EM: **410-510** nm • **39000**

**DyLight 405** - EX: 399 nm EM: 433 nm  
 EX: **390-420** nm DM: 440 nm EM: **450** nm (LP) • **19011**

**DyLight 488** - EX: 492 nm EM: 517 nm  
 EX: **450-510** nm DM 505 nm EM: **495-575** nm • **39002**

**DyLight 549** - EX: 554 nm EM: 569 nm  
 EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**DyLight 594** - EX: 592 nm EM: 616 nm  
 EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**DyLight 649** - EX: 652 nm EM: 667 nm  
 EX: **595-645** nm DM 655 nm EM: **665-715** nm • **39007**

**ECFP** - EX: 434 nm EM: 477 nm  
 EX: **425-445** nm DM 455 nm EM: **465-495** nm • **39001**

**EGFP** - EX: 488 nm EM: 507 nm  
 EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Emerald GFP** - EX: 489 nm EM: 510 nm  
 EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**EYFP/pH 7** - EX: 514 nm EM: 527 nm  
 EX: **485-505** nm DM 515 nm EM: **525-555** nm • **39003**

# FLUORESCENCE FILTER SETS (continued)

**FITC** - EX: 490 nm EM: 525 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Fluo-4** - EX: 494 nm EM: 516 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**FluoroGold** - EX: 390 nm EM: 600 nm

EX: **361-389** nm DM: 415 nm EM: **515** nm (LP) • **19012**

**FM™ 1-43** - EX: 479 nm EM: 598 nm

EX: **465-495** nm DM: 505 nm EM: **600** nm (LP) • **19010**

**FM™ 4-64** - EX: 515 nm EM: 740 nm

EX: **540-580** nm DM: 600 nm EM: **610** nm (LP) • **19006**

**FM™ 4-64** - EX: 515 nm EM: 740 nm

EX: **465-495** nm DM: 505 nm EM: **600** nm (LP) • **19010**

**FusionRed** - EX: 576 nm EM: 603 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**GFP** - EX: 488 nm EM: 507 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Hoechst 33258** - EX: 352 nm EM: 461 nm

EX: **347-403** nm DM 415 nm EM: **410-510** nm • **39000**

**Lucifer Yellow** - EX: 428 nm EM: 540 nm

EX: **380-460** nm DM 455 nm EM: **495-575** nm • **39008**

**LyoTracker Blue/MeOH** - EX: 373 nm EM: 425 nm

EX: **347-403** nm DM 415 nm EM: **410-510** nm • **39000**

**LyoTracker Green/pH 5.2** - EX: 504 nm EM: 511 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**LyoTracker Yellow HCK-123** - EX: 486 nm EM: 563 nm

EX: **465-495** nm DM 505 nm EM: **590-650** nm • **39009**

**mCherry** - EX: 587 nm EM: 610 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**mCitrine** - EX: 514 nm EM: 529 nm

EX: **485-505** nm DM 515 nm EM: **525-555** nm • **39003**

**MitoTracker Green FM/MeOH** - EX: 490 nm EM: 516 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**MitoTracker Orange/MeOH** - EX: 551 nm EM: 576 nm

EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**MitoTracker Red/MeOH** - EX: 578 nm EM: 599 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**mRFP1** - EX: 584 nm EM: 607 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**mWasabi** - EX: 493 nm EM: 509 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Oregon Green™ 488** - EX: 490 nm EM: 514 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**Oregon Green™ 514** - EX: 506 nm EM: 526 nm

EX: **485-505** nm DM 515 nm EM: **525-555** nm • **39003**

**Pacific Blue** - EX: 405 nm EM: 455 nm

EX: **390-420** nm DM: 440 nm EM: **450** nm (LP) • **19011**

**Propidium Iodide** - EX: 536 nm EM: 617 nm

EX: **465-495** nm DM 505 nm EM: **590-650** nm • **39005**

**Pulsar™ 650** - EX: 460 nm EM: 650 nm

EX: **465-495** nm DM: 505 nm EM: **600** nm (LP) • **19010**

**Pulsar™ 650** - EX: 460 nm EM: 650 nm

EX: **465-495** nm DM: 505 nm EM: **600** nm (LP) • **19010**

**Quasar® 670** - EX: 647 nm EM: 670 nm

EX: **595-645** nm DM 655 nm EM: **665-715** nm • **39007**

**Rhod-2** - EX: 552 nm EM: 581 nm

EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**Rhodamine 123** - EX: 507 nm EM: 529 nm

EX: **485-505** nm DM 515 nm EM: **525-555** nm • **39003**

**Rhodamine Red™-X** - EX: 570 nm EM: 590 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**Sulforhodamine 101** - EX: 586 nm EM: 605 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**SYBR® Green I** - EX: 498 nm EM: 522 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**SYTO 9/DNA** - EX: 483 nm EM: 500 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

**SYTO® 60** - EX: 652 nm EM: 678 nm

EX: **595-645** nm DM 655 nm EM: **665-715** nm • **39007**

**TagRFP** - EX: 556 nm EM: 584 nm

EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**TAMRA** - EX: 555 nm EM: 580 nm

EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**Texas Red®** - EX: 595 nm EM: 620 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**Texas Red®-X** - EX: 595 nm EM: 615 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**TO-PRO™-3** - EX: 642 nm EM: 661 nm

EX: **595-645** nm DM 655 nm EM: **665-715** nm • **39007**

**Topaz** - EX: 514 nm EM: 529 nm

EX: **485-505** nm DM 515 nm EM: **525-555** nm • **39003**

**TRITC** - EX: 555 nm EM: 580 nm

EX: **528-553** nm DM 565 nm EM: **578-633** nm • **39004**

**TurboFP650** - EX: 592 nm EM: 650 nm

EX: **540-580** nm DM: 600 nm EM: **610** nm (LP) • **19006**

**wtGFP** - EX: 475 nm EM: 509 nm

EX: **425-475** nm DM: 485 nm EM: **495** nm (LP) • **19008**

**X-rhod-1/Ca2+** - EX: 580 nm EM: 601 nm

EX: **540-580** nm DM 600 nm EM: **615-665** nm • **39010**

**ZsGreen1** - EX: 493 nm EM: 505 nm

EX: **465-495** nm DM 505 nm EM: **515-555** nm • **39002**

## 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, Ø 32 mm, consisting of one 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%)

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



# life science

stereo microscopes



stereo microscopes



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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

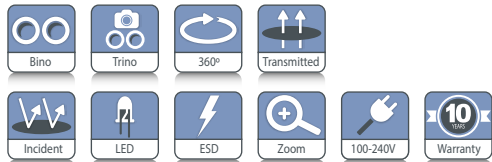
FEATURED

### NexiusZoom (EVO)

The NexiusZoom and NexiusZoom EVO stereo microscopes allow three-dimensional observation of your specimen, suitable for highly demanding applications. These top level zoom microscopes are perfect for analyzing all kinds of material surfaces or for observing and preparing 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 life science applications. With additional lenses and objectives magnifications from 3.3x up to 220x can be achieved

● NZ.1903-S



**NZ.1903-S / NZ.1703-S**  
339 (h) x 256 (w) x 311 mm (d) | 5.1 kg  
**NZ.1903-P / NZ.1703-P**  
299 (h) x 256 (w) x 311 mm (d) | 5.2 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
- Click-stops standard on EVO models
- Ergonomic stands
- Double 3 W LED illuminations
- Configurations up to 220x magnification
- Large working distance (WD)
- 10 Years warranty



● NZ.1903-PG

● 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 have  $\pm 5$  diopter adjustments. Interpupillary distance adjustable between 54 mm and 75 mm. Trinocular head is supplied with a fixed light path beam splitter (70:30). The NexiusZoom EVO models are now equipped with click-stops

### OBJECTIVES

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

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

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

### AUXILIARY LENSES

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



● NexiusZoom EVO  
NZ.5313

## POLARIZATION

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

## STAND

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

3 W transmitted and incident LED illuminators with internal power supply 100-240 V. Both illuminators can be used simultaneously and the light intensities can be adjusted separately. The universal single or double arm stands and the articulated stands can be equipped with the ring LED illuminators LE.1974 and LE.1973 and the LED cold light sources LE.5207 and LE.5212, ideal for creating or lifting shades

## 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.**

## MAGNIFICATIONS

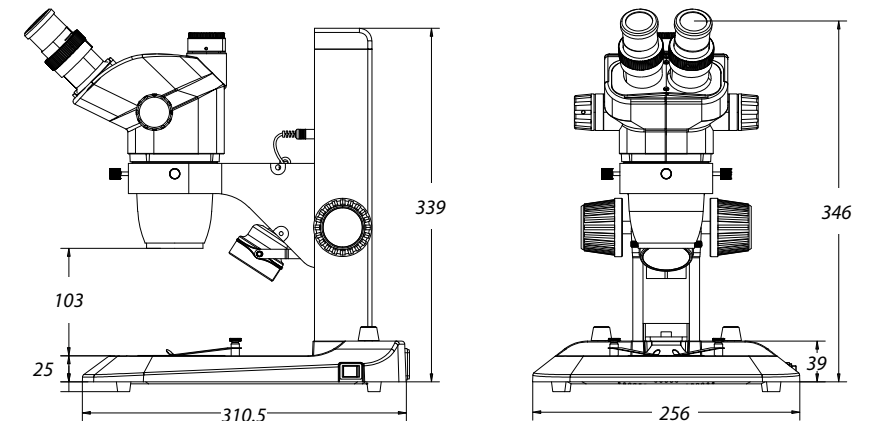
**NexiusZoom:** working distance and field of view with standard HWF 10x / 22 high wide field eyepieces

Zoom indication	Auxiliary lens 0.3x WD 287 mm		Auxiliary lens 0.4x WD 220 mm		Auxiliary lens 0.5x WD 183 mm		Auxiliary lens 0.75x WD 105 mm		Without auxiliary lens WD 110 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 34 mm	
	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm
0.67	2	109,5	2,7	82,1	3,35	65,7	5,0	43,8	6,7	32,8	10,1	21,9	13,4	16,4
0.7	2,1	104,8	2,8	78,6	3,5	62,9	5,3	41,9	7,0	31,4	10,5	21,0	14,0	15,7
0.8	2,4	91,7	3,2	68,8	4,0	55,0	6,0	36,7	8,0	27,5	12,0	18,3	16,0	13,8
1.0	3	73,3	4	55,0	5,0	44,0	7,5	29,3	10,0	22,0	15,0	14,7	20,0	11,0
1.5	4,5	48,9	6	36,7	7,5	29,3	11,3	19,6	15,0	14,7	22,5	9,8	30,0	7,3
2.0	6	36,7	8	27,5	10,0	22,0	15,0	14,7	20,0	11,0	30,0	7,3	40,0	5,5
3.0	9	24,4	12	18,3	15,0	14,7	22,5	9,8	30,0	7,3	45,0	4,9	60,0	3,7
4.0	12	18,3	16	13,8	20,0	11,0	30,0	7,3	40,0	5,5	60,0	3,7	80,0	2,8
4.5	13,5	16,3	18	12,2	22,5	9,8	33,8	6,5	45,0	4,9	67,5	3,3	90,0	2,4

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

Zoom indication	Auxiliary lens 0.3x WD 287 mm		Auxiliary lens 0.4x WD 220 mm		Auxiliary lens 0.5x WD 183 mm		Auxiliary lens 0.75x WD 105 mm		Without auxiliary lens WD 110 mm		Auxiliary lens 1.5x WD 53 mm		Auxiliary lens 2x WD 34 mm	
	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm	Total mag.	FoV in mm
0.65	1,95	117,9	2,6	88,5	3,25	70,8	4,9	47,2	6,5	35,4	9,8	23,6	13,0	17,7
0.7	2,1	109,5	2,8	82,1	3,5	65,7	5,3	43,4	7,0	32,9	10,5	21,9	14,0	16,4
0.8	2,4	95,8	3,2	71,9	4,0	57,5	6,0	38,3	8,0	28,8	12,0	19,2	16,0	14,4
1.0	3	76,7	4	57,5	5,0	46,0	7,5	30,7	10,0	23,0	15,0	15,3	20,0	11,5
1.5	4,5	51,1	6	38,3	7,5	30,7	11,3	20,4	15,0	15,3	22,5	10,2	30,0	7,7
2.0	6	38,3	8	28,8	10,0	23,0	15,0	15,3	20,0	11,5	30,0	7,7	40,0	5,8
3.0	9	25,6	12	19,2	15,0	15,3	22,5	10,2	30,0	7,7	45,0	5,1	60,0	3,8
4.0	12	19,2	16	14,4	20,0	11,5	30,0	7,7	40,0	5,8	60,0	3,8	80,0	2,9
4.5	13,5	17,0	18	12,8	22,5	10,2	33,8	6,8	45,0	5,1	67,5	3,4	90,0	2,6
5.5	16,5	13,9	22	10,5	27,5	8,4	41,3	5,6	55,0	4,2	82,5	2,8	110	2,1

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



● NZ.1902-S



● NZ.1902-P





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

MODELS	Bino	Trino	Pillar stand	Rack & pinion stand	Universal stand	Boom stand on heavy base plate	Boom stand on table clamp	Articulated arm stand on table clamp	Articulated arm stand on heavy base plate	Gooseneck dual LED	Mirror LED	Weight (kg)
NZ.1902-P	•		•									5.0
NZ.1902-PG	•		•							•		5.1
NZ.1902-M	•		•								•	4.9
NZ.1902-S	•			•								4.9
NZ.1902-U	•				•							15.6
NZ.1902-B	•					•						22.1
NZ.1902-BC	•						•					10.5
NZ.1902-A	•							•				8.6
NZ.1902-AP	•								•			20.7
NZ.1903-P		•	•									5.2
NZ.1903-PG		•	•							•		5.3
NZ.1903-M		•	•								•	5.1
NZ.1903-S		•		•								5.1
NZ.1903-U		•			•							15.7
NZ.1903-B		•				•						22.2
NZ.1903-BC		•					•					10.6
NZ.1903-A		•						•				8.7
NZ.1903-AP		•							•			20.8

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

MODELS	Bino	Trino	Pillar stand	Rack & pinion stand	Universal stand	Boom stand on heavy base plate	Boom stand on table clamp	Articulated arm stand on table clamp	Articulated arm stand on heavy base plate	Gooseneck dual LED	Mirror LED	Weight (kg)
NZ.1702-P	•		•									5.0
NZ.1702-PG	•		•							•		5.1
NZ.1702-M	•		•								•	4.9
NZ.1702-S	•			•								4.9
NZ.1702-U	•				•							15.6
NZ.1702-B	•					•						22.1
NZ.1702-BC	•						•					10.5
NZ.1702-A	•							•				8.6
NZ.1702-AP	•								•			20.7
NZ.1703-P		•	•									5.2
NZ.1703-PG		•	•							•		5.3
NZ.1703-M		•	•								•	5.1
NZ.1703-S		•		•								5.1
NZ.1703-U		•			•							15.7
NZ.1703-B		•				•						22.2
NZ.1703-BC		•					•					10.6
NZ.1703-A		•						•				8.7
NZ.1703-AP		•							•			20.8

The NexiusZoom EVO models are now equipped with click-stops

# ACCESSORIES AND SPARE PARTS

## HEADS & EYEPIECES

- NZ.5302** NZ binocular head 0.67-4.5x\*
- NZ.5303** NZ trinocular head 0.67-4.5x\*
- NZ.5312** NZ EVO binocular head 0.65-5.5x\*
- NZ.5313** NZ EVO trinocular head 0.65-5.5x\*

\*without head holder

- NZ.6010** Pair of HWF 10x/22 mm eyepieces
- NZ.6010-C** HWF 10x/22 mm eyepiece only with crosshairs
- NZ.6010-CM** HWF 10x/22 mm eyepiece only with 10/100 micrometer and crosshairs
- NZ.6015** Pair of HWF 15x/16 mm eyepieces for NZ
- NZ.6020** Pair of HWF 20x/12 mm eyepieces for NZ
- NZ.6099** Pair of eyecups for NZ
- NZ.6110** HWF 10x/22 mm eyepiece with crosshairs and 10/100 micrometer for NZ
- NZ.6210** Pair of HWF 10x/23 mm eyepieces for NZ EVO
- NZ.6210-C** HWF 10x/22 mm eyepiece only with crosshairs for NZ EVO
- NZ.6210-CM** HWF 10x/22 mm eyepiece only with 10/100 micrometer and crosshairs for NZ EVO

## AUXILIARY LENSES

- NZ.8903** Additional 0.3x lens for NZ. WD 287 mm. Only suitable for A, AP, U, B, BC and M stands
- NZ.8904** Additional 0.4x lens for NZ. WD 220 mm. Only suitable for P, PG, A, AP, U, B, BC and M stands
- NZ.8905** Additional 0.5x lens for NZ. WD 183 mm. Only suitable for P, PG, A, AP, U, B, BC and M stands
- NZ.8907** Additional 0.75x lens for NZ. WD 105 mm. Only suitable for P, PG, A, AP, U, B, BC and M stands
- NZ.8915** Additional 1.5x lens for NZ. WD 53 mm
- NZ.8920** Additional 2.0 lens for NZ. WD 34 mm



● NZ.8903 ● NZ.8904 ● NZ.8905 ● NZ.8907 ● NZ.8915 ● NZ.8920

## STANDS

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



● NZ.9005

● NZ.9000

## HEAD HOLDERS

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



● NZ.9095

## ILLUMINATION

- LE.5207** Multi-functional dual 3 W LED adjustable light source. Equipped with two flexible gooseneck arms with LED illuminator
- LE.5212** Euromex illumination station with two independently controlled goosenecks, a ring light and a transmitted stage illuminator (see photos on next page)
- LE.5260** Interchangeable high power (standard) white 6500K light guide for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.5261** Interchangeable high power 365 nm flexible arm for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.5262** Interchangeable high power 395 nm flexible arm for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.5263** Interchangeable high power 420 nm flexible arm for NZ.9018/LE.5207/LE.5212, 1 pc
- LE.1974** Ring illuminator with 72 LEDs with adjustable light intensity. External power supply 110-240 Vac / 12 Vdc (50/60 Hz). With segment controller. Brightness of 20,000 Lux at 100 mm distance and color temperature of 6,500 K. Mounting for stereo head with diameter from 25 to 61 mm

- LE.1973** Ring illuminator with 144 LEDs with adjustable light intensity. External power supply 100-240 Vac / 12 Vdc (50/60 Hz). With segment controller. Brightness of 23,000 Lux at 100 mm distance and color temperature of 6,500 K. Mounting for stereo head with diameter from 25 to 61 mm
- LE.5210** Euromex cold light illuminator EK-1, 100 W. 110V and 230V models available
- LE.5211** Euromex cold light illuminator, 150 W halogen. 110 V and 230 V models available
- LE.5211-LED** Euromex cold light illuminator LED, 30W high power LED
- LE.5214** Dual arm light conductor, gooseneck self-sustaining, 50 cm long, 4 mm diameter core
- LE.5215** Triple arm light conductor, gooseneck self-sustaining, 50 cm long, 4 mm diameter core
- LE.5222** Focusing head suitable for focusing lens LE.5214 and LE.5215. Needs LE.5224
- LE.5224** Aspherical focusing lens for mounting in LE.5222  
*More illumination options, see chapter 11*

## STAGES

- NZ.9505** Mechanical 180 x 155 mm X-Y stage with 75 x 75 mm translation and transparent glass plate
- NZ.9524** 360° rotatable circular stage with built-in polarization filter for NZ
- NZ.9525** 360° rotatable analyzer in mount to be screwed under head of NZ
- AE.1960** Round positioning table
- AE.5168-NZ** Heating stage for NZ microscope stage

## CAMERA ACCESSORIES

- NZ.9833** C-mount adapter with 0.33x lens for 1/3 inch cameras
- NZ.9850** C-mount adapter with 0.5x lens for 1/2 inch cameras
- AE.5130** Universal SLR adapter with built-in 2x lens for standard 23.2 mm tube. Needs T2 adapter
- AE.5025** T2 adapter for Nikon D SLR digital camera
- AE.5040** T2 adapter for Canon EOS SLR digital camera

MISCELLANEOUS

- NZ.8950** Protection glass window for NZ
- NZ.9520** Polarization kit for NZ: 360° rotatable circular stage with built-in polarization filter (NZ.9524) + analyzer in mount to be screwed under head (NZ.9525)
- NZ.9040** Darkfield attachment for NZ
- NZ.9570** Pair of object clamps for standard stage
- NZ.9572** Adjustable GEM object clamp for P, PL and S stand of NZ
- NZ.9950** Standard plexiglass object plate, opaque, with black border
- NZ.9956** Pair of object stage plates (black/white) Ø 90 mm
- NZ.9958** Standard glass object plate, opaque
- NZ.9983-R** 3 W LED replacement unit for NZ, incident illumination
- NZ.9983** 3 W LED replacement unit for NZ, transmitted illumination
- AE.1112** Micrometer 76 x 26 mm slide, 50 mm/500 divisions, 100 µm per division

DISPOSABLES

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

NZ = NexiusZoom

WD = working distance



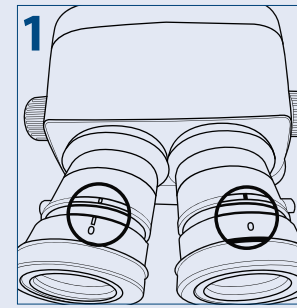
● NZ.9505



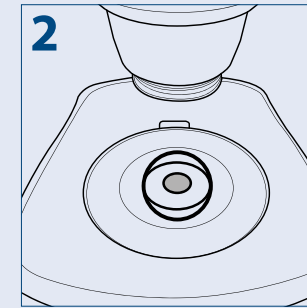
● The LE.5212 in two different configurations

how to set up a  
stereo microscope

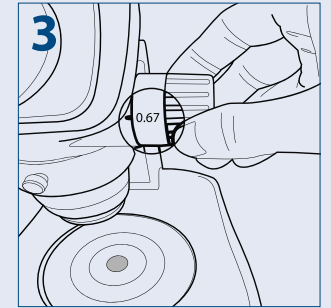
Setting up your stereo microscope properly is essential to getting parfocal images during the entire zoom range. It also prevents head aches, stressful eyes and fatigue. Below you will find a setup guide that will help get the best out of your microscope



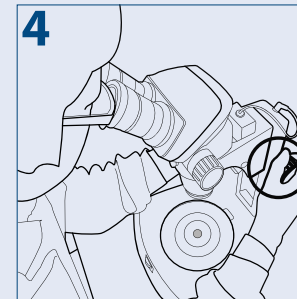
1 Turn the diopter adjustment rings of both eyepieces to position "0"



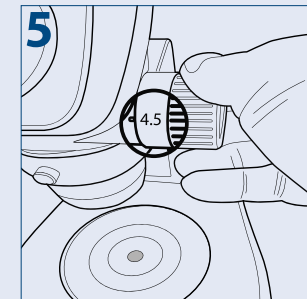
2 Put a specimen on the stage plate



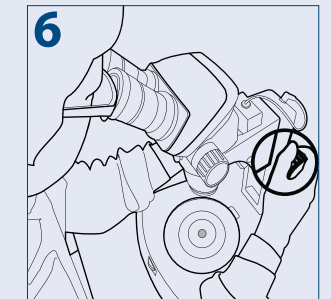
3 Turn the zoom adjustment knob to the lowest magnification



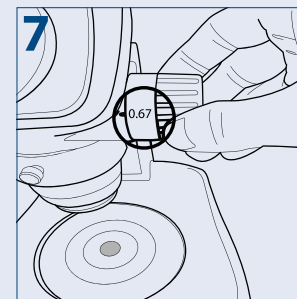
4 Rotate the focus adjustment knob to bring the specimen into focus



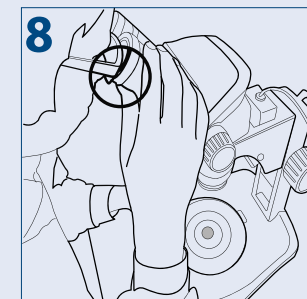
5 Turn the zoom adjustment knob to the highest magnification



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 focused during zooming

If not, please repeat steps 3 to 8



# STEREO MICROSCOPES

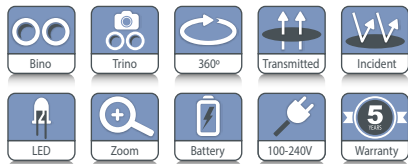


## StereoBlue

These stereo (zoom) microscopes are especially developed for laboratory applications, education and are greatly appreciated by biologists, entomologists and 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.1903</b>
330 (h) x 220 (w) x 266 mm (d)   4.4 kg
<b>SB.1903-P</b>
299 (h) x 220 (w) x 266 mm (d)   5.1 kg
<b>SB.1302/SB.1402</b>
330 (h) x 220 (w) x 266 mm (d)   4.0 kg
<b>SB.1302-P/SB.1402-P</b>
299 (h) x 220 (w) x 266 mm (d)   4.7 kg

## HIGHLIGHTS

- Designed for professional use
- Robust and sturdy
- WF 10x/21 mm eyepieces
- Dual magnification or zoom models
- Available in ergonomic rack & pinion, pillar and universal stands
- Double 3 W LED illumination
- Also available with batteries
- Ergonomic carrying grip
- 5 Years warranty



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

## SPECIFICATIONS

### EYEPIECES

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

### HEAD

- Binocular or trinocular 45° inclined tubes
- Diopter adjustment on both eyepieces, except the models SB.1302-P/1402-P and SB.1302 /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 beam splitter (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 21 mm/7 mm or 10.5 mm/5.25 mm
- Working distance 100 mm

### ZOOM OBJECTIVE

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



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

- Field of view 30 mm to 4.7 mm
- Working distance 100 mm

### STAND

The rack & pinion and pillar stands of the StereoBlue are equipped with ergonomic flat bases, complete with two object clamps and Ø 60 mm transparent and black/white stage plates. The coarse adjustment is equipped with tension control

The ergonomic universal single arm stand is ideal for observation of large samples or working under the microscope. Comes 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)*

## SPECIFICATIONS

### ILLUMINATION

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

### 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.1903

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

For working distances and fields of view, see chapter 2

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

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

- SB.9956** Stage plate black/white, Ø 60 mm
- SB.9983** 3 W LED replacement unit, incident illumination
- SB.9983-R** 3 W LED replacement unit, transmitted illumination
- AE.1112** Micrometer 76 x 26 mm slide, 50 mm/50 divisions

### CAMERA ACCESSORIES

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

### DISPOSABLES

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

### AUXILIARY LENSES

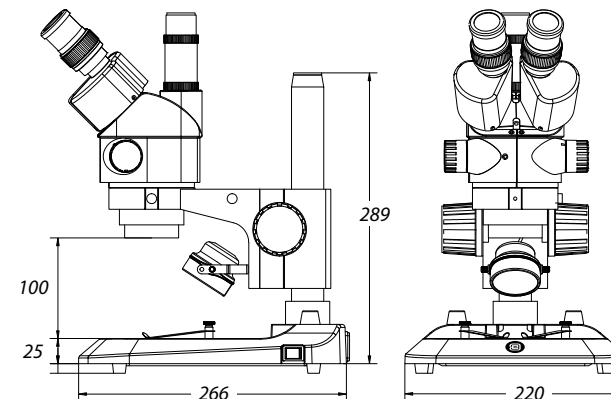
- SB.8903** Auxiliary 0.3x lens for zoom models, WD 247 mm. Only suitable for boom and articulated stands
- SB.8905** Auxiliary 0.5x lens for zoom models, WD 170 mm. Only suitable for SB.1902-P, SB.1903-P, SB.1902-U and SB.1903-U
- SB.8907** Auxiliary 0.75x lens for zoom models, WD 114 mm
- SB.8915** Auxiliary 1.5x lens for zoom models, WD 48 mm. Not suitable for SB.39xx

### POLARIZATION ATTACHMENT

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

### MISCELLANEOUS

- SB.8950** Protection glass window
- SB.9020** Universal single-arm stand without StereoBlue head holder
- SB.9090** Head holder for SB.9020
- SB.9040** Darkfield attachment, only for -S and -P models
- SB.9570** Pair of object clamps for stage
- SB.9952** Stage plate transparent, Ø 60 mm



# STEREO MICROSCOPES

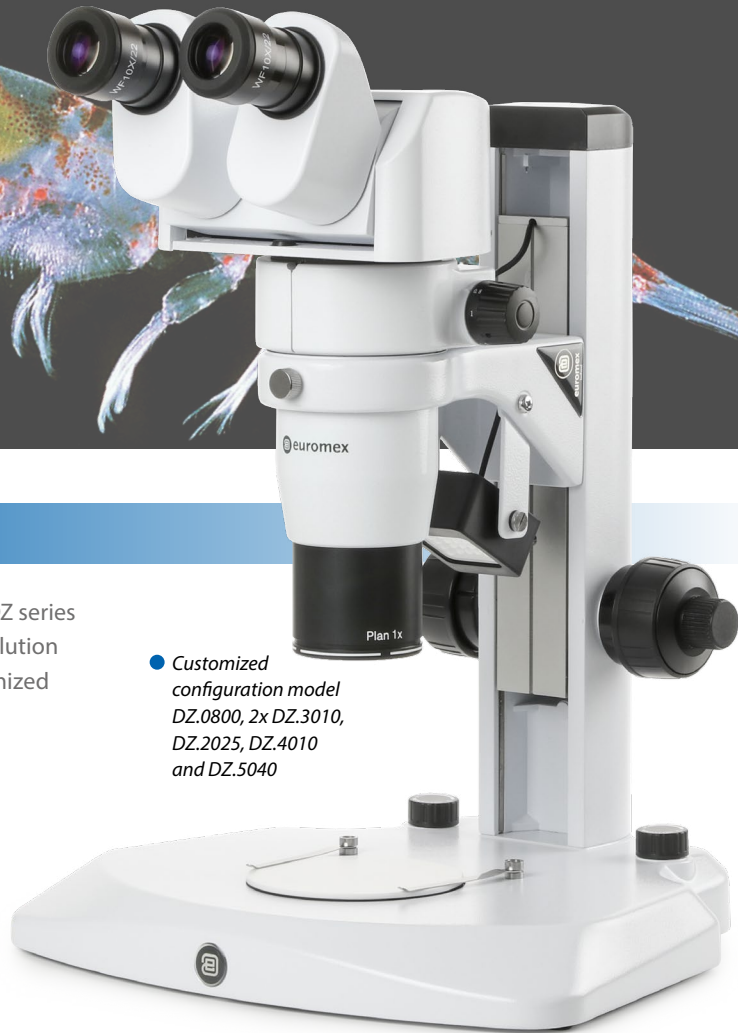
## DZ series

### DZ series

The modular stereo microscopes 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

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



**DZ.1100 / DZ.1600 / DZ.1800**  
305 (h) x 330 (w) x 285 (d) mm | 6.0 kg  
**DZ.1105 / DZ.1605 / DZ.1805**  
444 (h) x 330 (w) x 285 (d) 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 4x to 320x
- Fields of view from 55 mm to 1.4 mm
- Working distances from 126 mm 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
- Click-stops

### CENTRAL ZOOM UNIT

Three central zoom units are available:

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

### COMMON MAIN OBJECTIVE

Standard configurations are supplied with a plan apochromatic common main objective (CMO) 1x, working distance 78 mm. Other plan apochromatic common main objectives 0.5x (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



## STANDARD CONFIGURATIONS

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

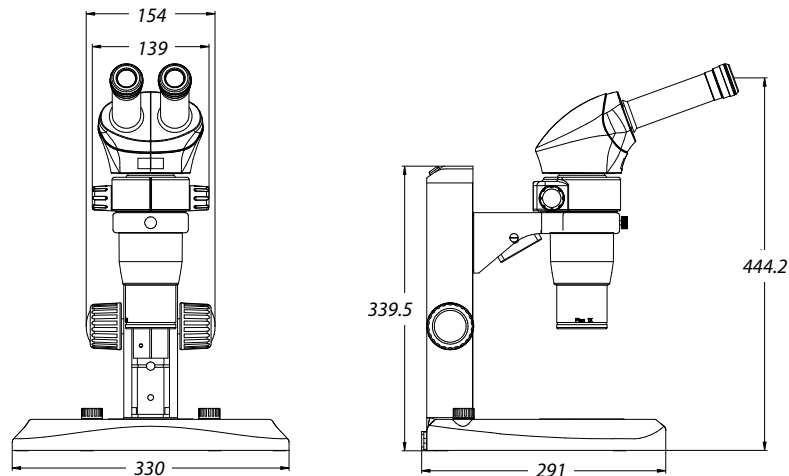
### DZ SERIES STANDARD

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



## BUILD YOUR OWN STEREO 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 with magnifications from 8 to 50 times
- DZ.0800** Central zoom unit 1:8 with magnifications from 8 to 64 times
- DZ.1000** Central zoom unit 1:10 with magnifications from 8 to 80 times

- 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)

### 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 crosshairs, 1 piece
- DZ.3015** WF 15x/16 eyepiece, 1 piece
- DZ.3020** WF 20x/12 eyepiece, 1 piece



• Eyepieces

### IRIS DIAPHRAGMS

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

### OBJECTIVES

- DZ.4003** Plan common main objective 0.3x. WD 276 mm
- DZ.4005** Plan apochromatic common main objective 0.5x. WD 126 mm
- DZ.4010** Plan apochromatic common main objective 1.0x. WD 78 mm

### FLUORESCENCE ATTACHMENT

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

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

**DZ.9049** Empty filter cube

*Other fluorescence filters available on request*

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



## ACCESSORIES/SPARE PARTS

### POLARIZATION ATTACHMENTS

**DZ.9045** Polarizer, 360° rotatable, to be mounted on common main objectives of DZ series

**DZ.9047** Polarizer, 360° rotatable, to be placed on the stage

### CAMERA ACCESSORIES

**DZ.9005** Photo port attachment with one 23.2 mm tube

**DZ.9007** Photo port attachment with two 23.2 mm tubes

**DZ.9013** C-mount 1x objective for insertion into photo port attachments

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

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

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

*Other T2 adapters on request*

### MISCELLANEOUS

**DZ.9020** Large 185 x 145 mm stage with mechanical X-Y 50 x 50 mm stage, to be moved by hand

**DZ.9040** Darkfield attachment for DZ.5040

**AE.1112** Micrometer slide, 50 mm/50 divisions

**AE.1900** Glass object plate, Ø 100 mm

**AE.1903** Acrylic white/black object plate

**50.875** Adjustable GEM clamp

**SL.5520** LED replacement for incident LED illumination of DZ.5040 stand

### DISPOSABLES

**AE.1385** 100 W HBO mercury vapor bulb for fluorescence

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

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

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



- *DZ.2020, ergonomic binocular tilting head*

# 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



• ZE.1624 and ST.1735



**HEAD + STAND ST.1740**  
210 (h) x 160 (w) x 240 (d) | 6.9 kg

## HIGHLIGHTS

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



• ZE.1671, AE.1950, LE.5210 and LE.5218

## SPECIFICATIONS

### EYEPIECES

Pair of SWF 10x/23 mm eyepieces

### HEAD

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

### ZOOM MAGNIFICATION OBJECTIVES

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

*Zoom objectives with click stops are also available on request  
All optics have an anti-reflection coating for maximum light throughput and are anti-fungus treated*

### STANDS WITHOUT ILLUMINATION

- ST.1710** Pillar stand with ST.1790 head holder.  
Pillar height 210 mm, diameter Ø 20 mm  
Dimensions 250 (h) x 150 (w) x 240 (d) mm
- ST.1718** Pillar ergonomically flat stand with ST.1790 head holder.  
Pillar height 213 mm, diameter Ø 20 mm.  
Dimensions 258 (h) x 330 (w) x 306 (d)

### 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: (d)240 x (w)160 x (h)290 min/max height 240-290 mm



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



## BOOM STANDS

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

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

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

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

## STAGE

- AE.1950** Large sliding X-Y stage, 350 x 270 mm, translation by hand

## FOCUSING

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

## PACKAGE CONTENT

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



● ST.1718

## ZOOM STEREO HEADS

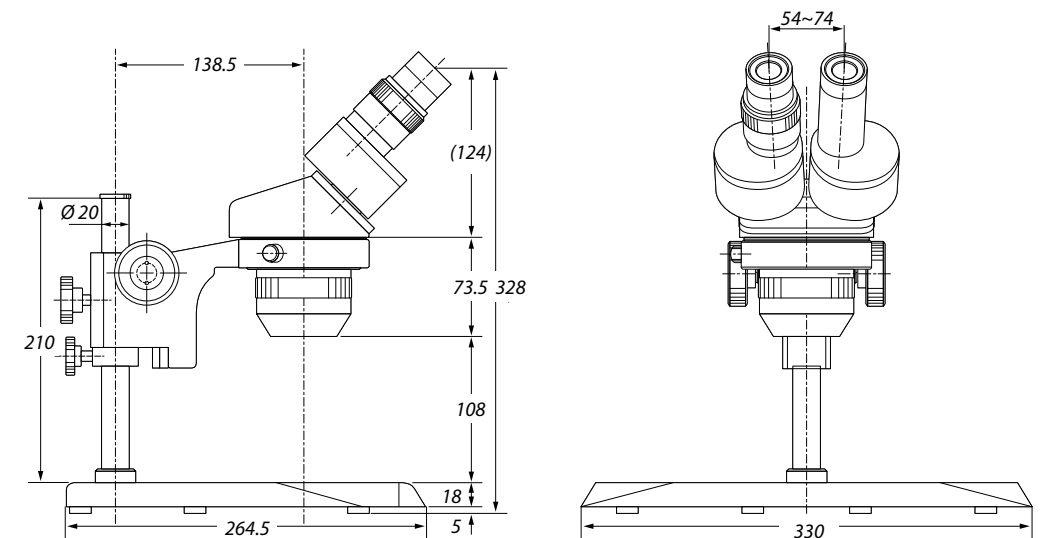
MODELS	Binocular	Trinocular	Tilt tubes	Objective zoom	Magnification	WD (mm)	Field of view (mm)
ZE.1624	•		45°	0.7 - 4.5x	7 - 45x	93	32/5.1
ZE.1654		•	45°	0.7 - 4.5x	7 - 45x	93	32/5.1
ZE.1657		•*	45°	0.7 - 4.5x	7 - 45x	104	32/5.1
ZE.1670	•		45°	1 - 7x	10 - 70x	104	23/3.3
ZE.1671		•*	45°	1 - 7x	10 - 70x	104	23/3.3

\* 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

## STANDS

MODELS	Column (mm)	Diameter (mm)	Rack & pinion	Base (w x d mm)	Height (mm)	Head holder	Illumination
ST.1710	210	20		240 x 150	250	ST.1790	
ST.1718	213	20		330 x 306	285	ST.1790	
ST.1720	610	29		780 x 270	650	ST.1794	
ST.1735			•	240 x 160	290		3 W LED
ST.1740			•	240 x 160	290		10 W Hal
65.980/65.983			•	Ø 1000 *	0/295	65.983	

\* Length with the two arms totally extended



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

## MICROMETER SLIDE

- AE.1112** Object slide 76 x 26 mm with micrometer  
50 mm/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** Analyzer, 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

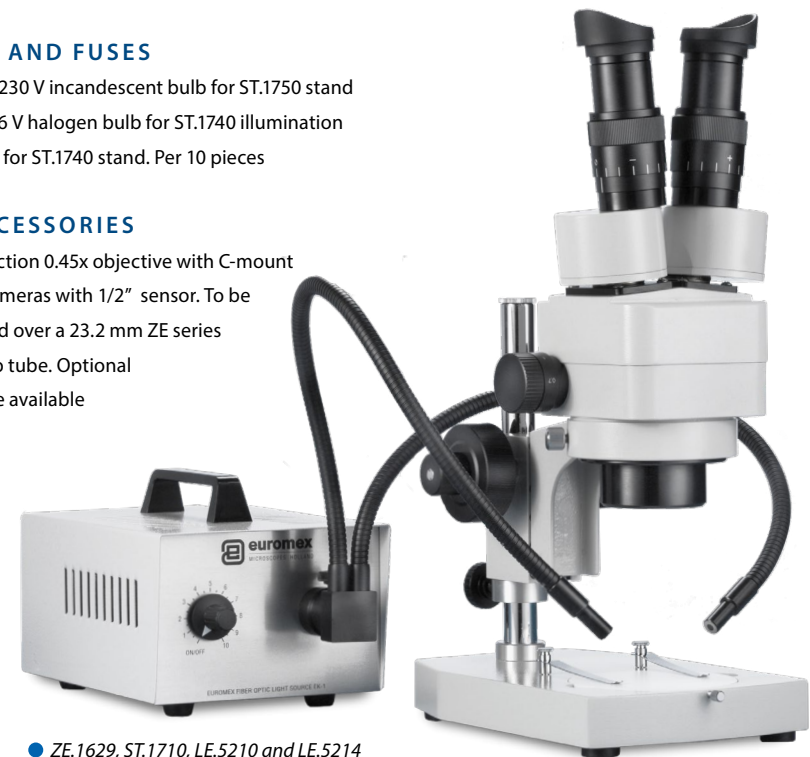
## SPARE BULB AND FUSES

- 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

## CAMERA ACCESSORIES

- AE.5059** Projection 0.45x objective with C-mount  
for cameras with 1/2" sensor. To be  
placed over a 23.2 mm 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 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

# P series

## STEREO MICROSCOPES

### P series

The microscopes of the P series are designed specifically 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 microscopes are compact and lightweight, ideal for lab or field work



● P-20 (60.200)



60.100 / 60.200  
290 (h) x 160 (w) x 240 (d) mm | 6.9 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 a total magnification of 10 and 30 times with fields of view from 20 mm to 6.7 mm
  - The P-20 and P20-8 LED models are supplied with revolving 2x/4x objectives for a total magnification of 20 and 40 times with fields of view from 10 mm 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 a maximum of 35 hours continuous cordless operation. Both illuminators can be operated independently or simultaneously. Comes with external mains adapter



## about microscope optics

### 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

### EYEPIECES

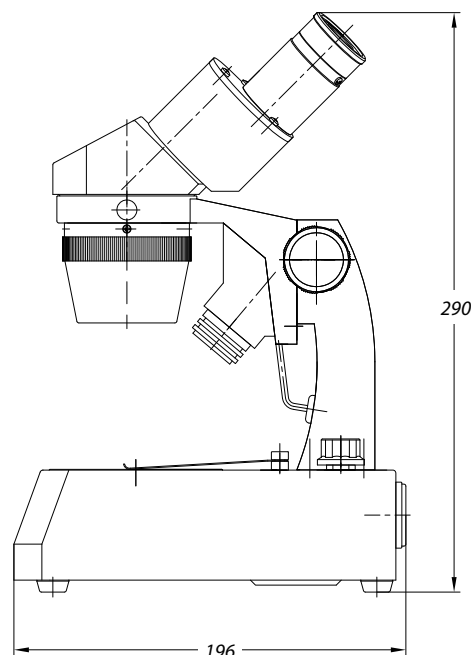
- 50.805** Pair of wide field eyepieces WF 5x/22 mm
- 50.810** Pair of wide field eyepieces WF 10x/20 mm
- 50.811** Micrometer eyepiece WF 10x/20 mm, 10 mm/100
- 50.815** Pair of wide field eyepieces WF 15x/16 mm
- 50.820** Pair of wide field eyepieces WF 20x/10 mm
- 50.840** Pair of eyecups

### MISCELLANEOUS

- 50.871** Black/white stage plate 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

### DISPOSABLES

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



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	•		•			•	•

### 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

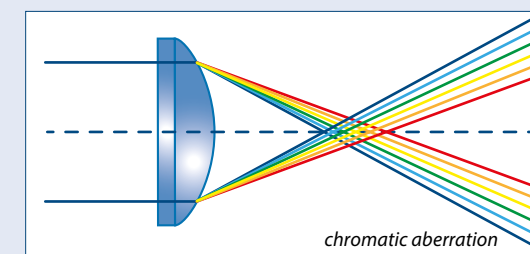
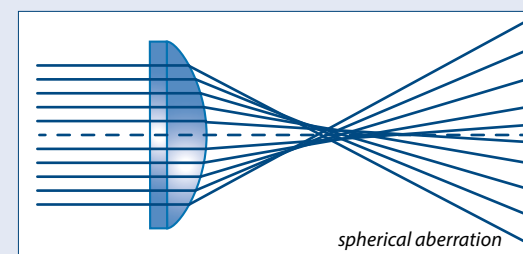
If one needs to detect details of 10 μm, one needs at least 300 μm / 10 μm = 30x magnification in order to resolve this detail. Knowing that conventional stereo microscopes can magnify - without the help of additional lenses and without introducing additional optical aberrations – up to approximately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

# life science

digital solutions



## digital solutions



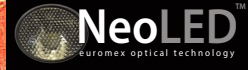
Get ready to discover the digital world of microscopy with the newest Euromex digital laboratory products. The broad Euromex product range of digital cameras and digital microscopes with built-in camera offers the best suitable solutions for your specific application needs

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

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- USB CAMERAS • PAGE 245**
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- COOLED CAMERAS • PAGE 252**
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- SOFTWARE • PAGE 256**
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# DIGITAL MICROSCOPES



## BioBlue

digital microscopes  
with built-in  
5 MP USB-2.0 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 and with built-in rechargeable batteries for corded and cordless use

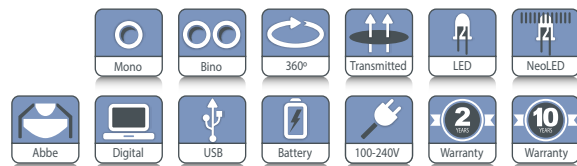
● BB.4225

BB.4225 / BB.4245 / BB.4255

340 (h) x 155 (w) x 230 mm (d) | 3.4 kg

BB.4267 / BB.4269

360 (h) x 155 (w) x 230 mm (d) | 4.1 kg



## HIGHLIGHTS

- Monocular and binocular models
- Reversed quadruple nosepiece for semi plan objectives
- Built-in digital 5 MP USB-2.0 camera
- Integrated mechanical stage
- LED and NeoLED™ illumination
- Cordless operation
- 10 Years warranty (2 years on camera)



● BioBlue digital (binocular head)



● BioBlue digital (monocular head)

## SPECIFICATIONS

### CAMERA

All the BioBlue digital microscopes are equipped with a 5 MP CMOS USB-2.0 camera, maximum resolution 2560 x 1920, 24 bits color depth. Delivered with ImageFocus Plus software, USB-2.0 cable and a micrometer 1mm/100 slide

### SOFTWARE

The capture and analysis ImageFocus 4 software allows 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 version is also available. Free updates can be downloaded from our website

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

MODELS	Mono	Bino	Semi plan 4x, 10x and S40x objectives	Semi plan S60x 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



# DIGITAL MICROSCOPES



**bScope®**

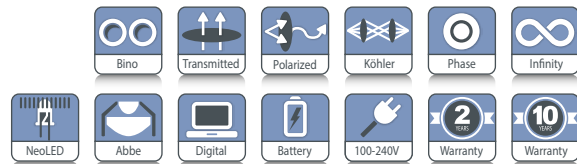
digital microscopes  
with built-in  
5.0 MP USB-2.0 camera

The versatile and evolutive bScope® microscopes are well-equipped and intensively used in universities, small to mid-sized laboratories and for veterinary applications

The bScope® comes with WF 10x/20 mm eyepieces and is available in binocular models. Complete with E-plan IOS and Plan IOS infinity corrected objectives for brightfield observations. Also EPLPHi IOS and PLPHi IOS infinity corrected objectives for phase contrast observations

● BS.1157-PLi

BS.1157-EPLi  
409 (h) x 195 (w) x 235 (d) | 7.1 kg



## HIGHLIGHTS

- Binocular model
- 2-position swiveling ergo head
- Integrated 5.0 MP CMOS color USB.2 camera
- 2592 x 1944 pixels
- Dynamic range of 76 db
- Signal/noise ratio of 41 db
- 10 Years warranty (2 years on camera)

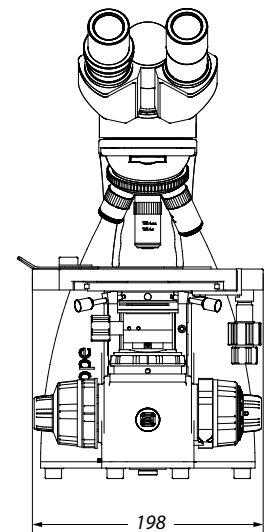
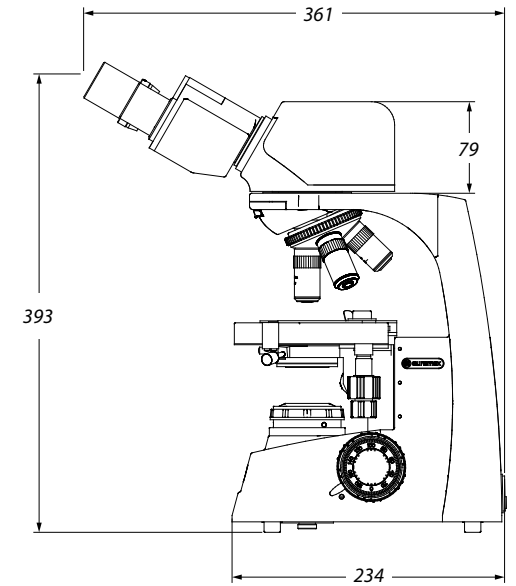
## SPECIFICATIONS

### CAMERA

The digital bScope microscopes are equipped with a 5.0 MP 1/2.5 inch CMOS USB-2.0 camera, 24 bits color depth, 7 frames per second (2592 x 1944 pixels) or 27 frames per second (1280 x 960 pixels). Dynamic range is 76 db and signal/noise ratio 41 db. Supplied with ImageFocus Alpha software, USB-2.0 cable and a micrometer 1mm/100 calibration slide

### SOFTWARE

The capture and analysis ImageFocus Alpha software allows to save images in .jpg, .tif, .bmp or .dicom formats as well as .avi format videos. Measurements and annotations can be done on live or captured images. Compatible with Windows 7, 8 and 10, both 32 and 64 bits configurations. A Mac OS version is also available. Free updates can be downloaded from our website. For full microscope specifications and accessories see chapter 4: Biological microscopes



### MODELS

	HWF 10x/20 mm eyepieces	Quintuple nosepiece E-plan IOS 4/10/540/S100x	Quintuple nosepiece plan IOS 4/10/540/S100x	Quintuple nosepiece E-plan phase IOS 10/20/ S40/S100x	Quintuple nosepiece plan phase IOS 10/20/540/S100x	Köhler NeoLED™	2-position swiveling ergo head
BS.1157-EPLi	•	•				•	•
BS.1157-PLi	•		•			•	•
BS.1157-EPLPHi	•	•		•		•	•
BS.1157-PLPHi	•		•		•	•	•

All models can optionally be supplied with three AA rechargeable batteries

# MACROZOOMS

# MZ series

## MZ.5000 digital macrozoom

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

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



● MZ.5000



MZ.5000  
445/635 (h) x 320 (w) x 260 mm (d) | 4.6 kg

## HIGHLIGHTS

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



● Adjustable screen

## SPECIFICATIONS

### CENTRAL ZOOM OBJECTIVE

The Digital MacroZoom MZ.5000 features a single zoom objective with a 0.7 to 5x zoom magnification. Zoom adjustment engravings on 1, 1.5, 2, 3, 4 and 5x. The working distance is 105 mm. Supplied with a 0.5x additional lens with a working distance of 170 mm

### STAND

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

### ILLUMINATION

A supplied 5,500 K LED ring light with 56 LED's can be mounted under the microscope body. The intensity is adjustable

### BUILT-IN CAMERA

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

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

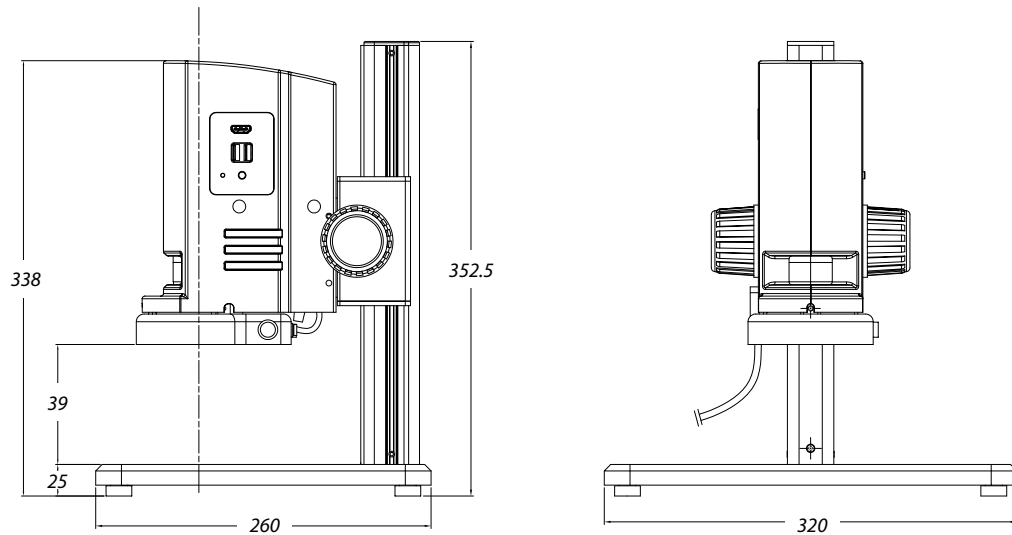
### BUILT-IN SOFTWARE

The built-in on-screen software is mouse driven and features functions such as Capture image, Freeze image, Automatic white balance, Automatic exposition, File manager, Grids and camera settings such as exposure time, gain, saturation, contrast, sharpness, HDR

Measurement functions are also available from the software such as line, area, angle. Images are saved in .jpg format and videos are saved in .avi format. With the digital zoom function, objects can be observed with a magnification up to 70 times

**PACKAGE CONTENT**

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



how to match  
**camera resolution**

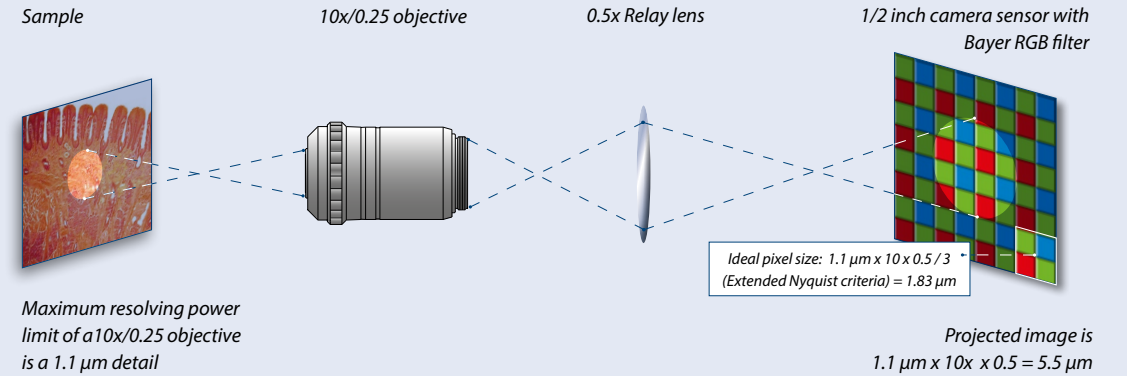
In microscopy, the image of the sample under observation is projected by the optical components of the microscope (objective lenses, eyepiece lenses, intermediate lens or camera relay lenses) onto the surface of a camera sensor or the retina of a human eye

a more important specification is the pixel size of the camera sensor. What might be astonishing to know about digital resolution of camera's is the fact, that the higher the magnification, the fewer pixels the chip of a camera needs!

Not the total amount of pixels – which basically determines the field of view of the camera image - is primordial but

To optimize the transfer of the details of the sample (resolving power) to the camera, the pixel size of the photodiodes of the camera sensor is a key element

**EXAMPLE OF A 10X/0.25 OBJECTIVE WITH 1/2 INCH CAMERA SYSTEM**



**MAXIMUM AND OPTIMUM PIXEL SIZE REQUIREMENTS:**

Obj. Magn.	NA	Resolving power <sup>(1)</sup> (μm)	Projected size (μm)	Projected size with 0.5x lens (μm)	Maximum <sup>(2)</sup> camera pixel size (μm)	Optimum <sup>(2)(3)</sup> camera pixel size (μm)
1x	(0.04)	6.90	6.90	3.45	1.72	1.15
2x	(0.06)	4.60	9.20	4.60	2.30	1.53
4x	(0.10)	2.80	11.2	5.60	2.80	1.86
10x	(0.25)	1.10	11.0	5.50	2.75	1.83
20x	(0.40)	0.69	13.8	6.90	3.45	2.30
40x	(0.65)	0.42	16.8	8.40	4.20	2.80
60x	(0.80)	0.34	20.4	10.2	5.10	2.40
100x	(1.25)	0.22	22.0	11.0	5.50	3.67

<sup>(1)</sup> Resolving power of the objectives:  $r = 1.22 \cdot \lambda / (NA \text{ Objective} + NA \text{ Condenser})$ . With NA = numerical aperture,  $\lambda$  = wavelength and r = optical resolving power. The resolving power limits are based on various theoretical calculations. Low specimen contrast, improper or low illumination conditions, etc, may serve to lower resolving power limits, more often than not, the real-maximum values are not realized in practice

<sup>(2)</sup> The Nyquist criterion states that the maximum camera pixel size can't exceed half of the resolving limit of the objective. For high resolution images, the Nyquist criterion is even extended to 2.5 to 3 pixels per detail and thus the optimum camera pixel size <sup>(3)</sup> is calculated as maximum 1/3 of the resolving limit of the objective

<sup>(3)</sup> Although smaller pixel size of photodiodes of the camera sensor improve the resolution, smaller pixel sizes lower signal to noise ratios, lower the dynamic range and collect less light! Binning techniques can compensate for lower signal to noise ratios



## WIFI CAMERA

WIFI  
CAMERA

FEATURED



## 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

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

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)	Sensitivity 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-2.0 cable, 30.0 and 30.5 mm adapters to use with stereo microscopes, and a 0.45x C-mount objective

## USB CAMERAS

CAMERAS FOR  
LIFE SCIENCE



## CMEX USB-2.0 cameras

with fast CMOS sensor

The CMEX-2f, CMEX-5f and CMEX-12f are equipped with a fast CMOS sensor. The CMEX cameras are equipped with USB-2.0 data interface and supplied with ImageFocus Plus 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 version is also available. Free updates can be downloaded from our website

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

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

## USB CAMERAS

ADVANCED  
CAMERAS FOR  
LIFE SCIENCE

FEATURED



● CMEX-18 Pro

## Advanced CMEX USB-3.0 cameras with CMOS sensor

The CMEX-3 Pro, -5 Pro, -10 Pro and -18 Pro cameras are equipped with a 3.1, 5.1, 10 or 18 MP CMOS sensor with 12 bits grayscale conversion and a 24 bits color rendering. These cameras are equipped with a USB-3.0 data interface enabling fast frame rate 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 version is available. Free updates can be downloaded from our website

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

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

## USB CAMERAS

SCIENTIFIC  
GRADE CAMERAS  
FOR LIFE SCIENCE

FEATURED



● sCMEX

## sCMEX USB-3.0 cameras with scientific grade sCMOS sensor

The sCMEX-3, sCMEX-6 and sCMEX-20 cameras are equipped with a scientific grade back illuminated Sony sCMOS sensor with 16 bits grayscale conversion and an outstanding 36 bits color rendering. Suitable for brightfield, darkfield and fluorescence. The sCMEX cameras are equipped with a USB-3.0 data interface 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. Also compatible with Mac OS. PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2 GB memory, USB-3.0 port, 17 inch display. Free updates can be downloaded from our website

MODELS	Number of pixels (MP)	Sensor	Sensor size (inches)	Pixels size (µm)	Exposure time	Resolutions	Max. frames (p/sec)	Color rendering	Sensitivity V/lux-sec	Product number
sCMEX- 3	3.1	sCMOS	1/2.8"	2.5 x 2.5	0.244 ~ 15000 ms	2048 x 1536 1920 x 1080	50 58	36 bits	0.15	DC.3000s
sCMEX- 6	6.3	sCMOS	1/1.8"	2.5 x 2.5	0.244 ~ 15000 ms	3072 x 2048 1536 x 1024	30 38	36 bits	0.15	DC.6000s
sCMEX-20	20.0	sCMOS	1"	2.4 x 2.4	0.264 ~ 15000 ms	5440 x 3648 2736 x 1824 1824 x 1246	15 50 60	36 bits	0.21 0.21 0.21	DC.20000s

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



# HD AND HD-AUTOFOCUS CAMERAS

HIGH DEFINITION  
CAMERAS FOR  
LIFE SCIENCE

FEATURED



## High definition HD1080p and 720p CMOS color cameras with HDMI and USB-2.0/3.0 interfaces

The Euromex HD-4K, 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 dedicated 11.6" HD screen, TV-HD or HD-beamer with a HDMI

input and the system is ready to go. The HD-4K camera can also be connected to a GbE ethernet and DHCP enabled network router and has also a WiFi interface. The mouse driven built-in software of the camera enables captured images and recorded videos\* to be saved on the integrated SD memory card

With the HD-4K, HD-Ultra, HD-Lite and HD-Autofocus cameras, the captured images or recorded video\*s\* can be very easily reviewed or replayed on the HD screen. The HD-4K and HD-Ultra even offer a full range of measuring functions on live and captured images. The HD-Autofocus offers measuring functions on live image only

\*video function only available with HD-4K (.mp4),

HD-Ultra (.avi) and HD-Lite (.avi) 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 software. It runs

## 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 and SD memory card
- C-mount interface
- HDMI, USB-2.0/3.0, GbE and WiFi interface(s)
- Autofocus model available
- Compatible with ImageFocus software

on Windows 7, 8 and 10, both 32 and 64 bits. 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 software



VC.3036-HDS on stereo microscope

## PACKAGE CONTENT

MODELS	HD-4K	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus	HD-Pro
Software	ImageFocus Alpha	ImageFocus Plus	ImageFocus Plus	--	--	ImageFocus Alpha
Software languages	15 <sup>(2)</sup>	6 <sup>(1)</sup>	6 <sup>(1)</sup>	English	15 <sup>(2)</sup>	15 <sup>(2)</sup>
Compatible	Win 7, 8 and 10 Mac OS	Win 7, 8 and 10 Mac OS	Win 7, 8 and 10 Mac OS	--	--	Win 7, 8 and 10 Mac OS
C-mount with objective	0.5x	0.37x	0.45x	0.37x	0.5x	0.37x
Interface(s)	•	•	•	Only HDMI	•	•
30 and 30.5 mm adapters	•	•	•	•	•	•
SD card	16 GB	8 GB	4 GB	16 GB	16 GB	16 GB
Calibration slide 10mm/100	•	•	•	•	•	•
External power supply	12V 1A	12V 2A	12V 2A	12V 1A	12V 1A	12V 1A
Dimensions (w x d x h)	78 x 65 x 98	80 x 70 x 90	80 x 70 x 90	50 x 50 x 60	81 x 65 x 78	81 x 65 x 78
Weight (grams)	555	440	280	150	500	500
Product number	VC.3040	VC.3036	VC.3031	VC.3020	VC.3034	VC.3038
With 11.6" HD screen	VC.3040-HDS	VC.3036-HDS	VC.3031-HDS	VC.3020-HDS	VC.3034-HDS	VC.3038-HDS

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

<sup>(2)</sup> English, Catalan, French, German, Indonesian, Italian, Japanese, Korean, Polish, Russian, Simplified Chinese, Spanish, Thai, Traditional Chinese, Turkish



## ALL HD-CAMERAS

MODELS	HD-4K	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus	HD-Pro HDMI
Sensor	Sony 4K	Sony	Aptina	Aptina	Sony	Sony
Format	1/1.8", HDTV 1080p	1/2.8", HDTV 1080p	1/2.5", HDTV 1080p	1/3", HDTV 720p	1/1.9", HDTV 1080p	1/2.8", HDTV 1080p
Pixels	3840 x 2160 <sup>(1)</sup> HDMI 60 fps USB 30 fps	3264 x 1836 <sup>(1)</sup> 1920 x 1080 <sup>(2)</sup> HDMI 60 fps USB 30 fps	2592 x 1944 <sup>(1)</sup> 1920 x 1080 <sup>(2)</sup> HDMI 15 fps, USB 15fps	1280 x 720 <sup>(1)</sup> 1280 x 720 <sup>(2)</sup> HDMI 30 fps	1920 x 1080 <sup>(1)</sup> HDMI 60 fps	1920 x 1080 <sup>(1)</sup> 1920 x 1080 <sup>(2)</sup> HDMI 60 fps, USB 26 fps
Pixel size	2.0 x 2.0 (µm)	2.8 x 2.8 (µm)	2.2 x 2.2 (µm)	3.75 x 3.75 (µm)	3.75 x 3.75 (µm)	2.9 x 2.9 (µm)
Video recording	1080p	1080p	1080p	--	1080p	1080p
Video output	HDMI, USB-3.0 <sup>(3)</sup> , GbE ethernet, WiFi <sup>(5)</sup>	HDMI, USB-2.0	HDMI, USB-2.0	HDMI	HDMI, USB-C <sup>(4)</sup>	HDMI, USB-2.0
Scan mode	Progressive	Progressive	Progressive	Progressive	Progressive	Progressive
Exposure	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual
White balance	Automatic/ manual/ROI	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual	Automatic/ manual/ROI
Sensitivity lux-sec	505 mV	510 mV	1 V	6.5 V	1.12 V (1/30s)	1.3 V (1/30s)
Color rendering (bits)	36	36	24	24	24	24
Signal/Noise (db)	44	55	40.5	44	50	38
Dynamic (db)	--	69	60	85	65	66
Storage	16 GB SD card (max. 32 GB)	8 GB SD card (max. 32 GB)	4 GB SD card (max. 32 GB)	16 GB SD card (max. 32 GB)	16 GB SD card (max. 32 GB)	16 GB SD card (max. 32 GB)
Camera buttons	on/off	on/off	on/off	--	on/off	on/off
Mounting	C-mount	C-mount	C-mount	C-mount	C-mount	C-mount
External power supply	100-240 Vac to 12Vdc/1A	100-240 Vac to 12Vdc/2A	100-240 Vac to 12Vdc/2A	100-240 Vac to 12Vdc/1A	100-240 Vac to 12Vdc/2A	100-240 Vac to 12Vdc/2A
Relative humidity	10-60 %	45-85 %	45-85 %	30-80 %	45-85%	30~80%
Temperature Operation Storage	-10 – 50° C -20 to 60° C	0 – 60° C -20 to 70° C	0 – 60° C -20 to 70° C	-10 – 40° C -20 to 60° C	-10-40° C -20°C to 60° C	-10~ 50° C -20°C to 60° C
Product number	<b>VC.3040</b> <b>VC.3040-HDS</b> <sup>(4)</sup>	<b>VC.3036</b> <b>VC.3036-HDS</b> <sup>(4)</sup>	<b>VC.3031</b> <b>VC.3031-HDS</b> <sup>(4)</sup>	<b>VC.3020</b> <b>VC.3020-HDS</b> <sup>(4)</sup>	<b>VC.3034</b> <b>VC.3034-HDS</b> <sup>(4)</sup>	<b>VC.3038</b> <b>VC.3038-HDS</b> <sup>(4)</sup>

<sup>(1)</sup> capture mode <sup>(2)</sup> live view <sup>(3)</sup> USB-2.0 compatible <sup>(4)</sup> model with attached high definition screen <sup>(5)</sup> available from November 2019

## BUILT-IN SOFTWARE FEATURES (HDMI MODE)

MODELS	HD-4K	HD-Ultra	HD-Lite	HD-Mini	HD-Autofocus	HD-Pro HDMI
Image capturing (JPEG)	3840 x 2160	3261 x 1840	2592 x 1944	1280x720	1920 x 1080	1920 x 1080
Video recording	3840 x 2160 MP4	1920 x 1080 AVI	1920 x 1080 AVI	--	1920 x 1080 ASF	1920 x 1080 ASF
Browse saved images	•	•	•	--	•	•
Browse saved video's	•	•	•	--	no	•
SD card storage	16 GB	8 GB	4 GB	16 GB	16 GB	16 GB
Mouse driven	•	•	•	•	•	•
Auto exposure	•	•	•	•	•	•
Exposure time	0.04 ~ 1000 ms	0.001s ~ 10 s	0.001s ~ 10 s	0.2 ~ 2000 ms	0.06 ~ 918 ms	0.036 ~ 8000 ms
Gain	•	•	•	•	•	•
RGB & white balance	•	•	•	•	•	•
Gamma	•	•	•	•	•	•
Sharpness	•	•	•	•	•	•
Noise reduction	3D algorithm	3D algorithm	3D algorithm	Standard	Standard	Standard
Saturation & contrast	•	•	•	•	•	•
Horiz. & vert. flip	•	•	•	•	•	•
Grids	cross/multi	cross/multi	multi	m ulti	multi	User defined
Autofocus	--	--	--	--	•	--
Compare function	•	•	•	--	•	•
Measurement functions	captured & live images	captured & live images	--	--	live image only	captured & live images
Calibration table	•	•	--	--	•	•
Line & free curve	•	•	--	--	•	•
Polygon & rectangle	•	•	--	--	•	•
Angle	•	•	--	--	•	•
Circle 3 points	•	•	--	--	•	•
Circle radius	•	•	--	--	•	•
Export function	CSV	CSV, Txt	--	--	CSV	CSV
Languages	5 <sup>(2)</sup>	8 <sup>(1)</sup>	8 <sup>(1)</sup>	--	5 <sup>(2)</sup>	5 <sup>(2)</sup>
Product number	<b>VC.3040</b> <b>VC.3040-HDS</b>	<b>VC.3036</b> <b>VC.3036-HDS</b>	<b>VC.3031</b> <b>VC.3031-HDS</b>	<b>VC.3020</b> <b>VC.3020-HDS</b>	<b>VC.3034</b> <b>VC.3034-HDS</b>	<b>VC.3038</b> <b>VC.3038-HDS</b>

<sup>(1)</sup> English, simplified Chinese, traditional Chinese, German, Italian, French, Japanese, Korean

<sup>(2)</sup> English, Simplified Chinese, Traditional Chinese, Korean and Thai

# COOLED CAMERAS

COOLED  
CAMERAS FOR  
LIFE SCIENCE



● DC.20000i and DC.6000i



## Cooled color camera with CCD or CMOS sensor

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

All cameras are supplied with ImageFocus Alpha software. The software has specific functions for fluorescence like combining capture fluorescence images. Furthermore it allows capturing of images and videos, doing measurements and annotations, generating reports, live image stitching etc. Compatible with Windows 7, 8 and 10, both 32 and 64 bits configurations. A Mac OS version is also supplied (with a few differences in features)

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

## about field of view

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

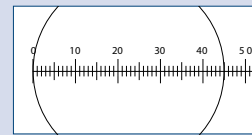
### CALCULATING FOV OF AN EYEPIECE

The FOV through an eyepiece is equal to:

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

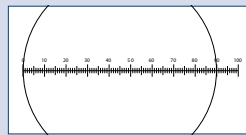
Field number (FN) is usually engraved on the eyepiece as a figure next to the magnification and expressed in mm, e.g. WF 10x/18. A 10x/18 eyepiece with a 40x objective will have a FOV = 18 mm / 40 = 0.45 mm or 450 nm

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



Micrometer stage 1 mm/100

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

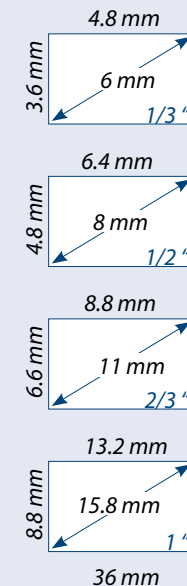


Micrometer stage 1 mm/100

### FIELD OF VIEW WITH CAMERA

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

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

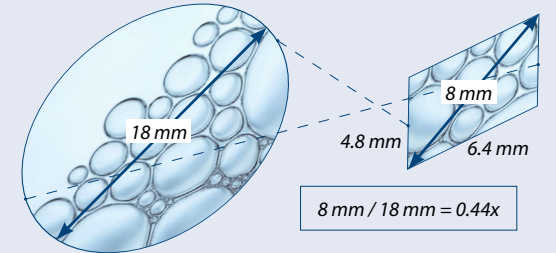


## TECHNICAL FACTS

### EYEPIECE VERSUS CAMERA FOV

Circular FOV through a WF10x/18 eyepiece

1/2" camera sensor and its rectangular FOV



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

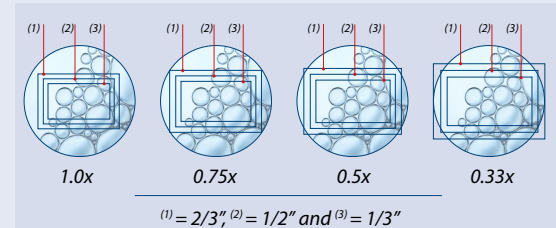


Figure: different camera sensor sizes (2/3, 1/2, 1/3 inch) with different "demagnifying" lenses (C-mount photo-adapters) 0.33x, 0.50x, 0.75x and 1.0x

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

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



TABLET CAMERAS



ProPad tablet

with microscope camera and keyboard-docking station

The ProPad Full HD (1280x800) display reveals bright colors and crisp images.

The ProPad consists of a high quality microscope camera system and a fully detachable tablet running the latest ImageFocus version.

You can take it anywhere

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

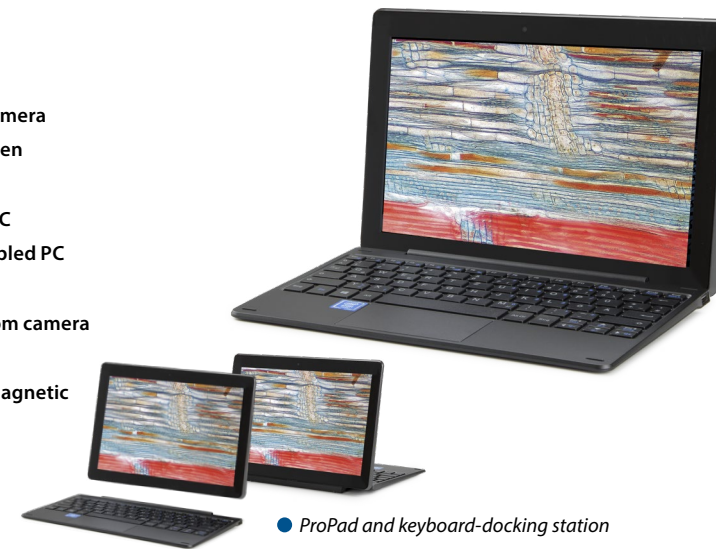
SOFTWARE

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



HIGHLIGHTS

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



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	Dynamic (db)	Sensitivity V/lux-sec	Interface	Product number
ProPad-2	2.1	1/2.9"	1920 x 1080	2.8 x 2.8	12 bits	24 bits	--	0.51	Windows, USB 2.0	PP.2000f
ProPad-5	5.1	1/2.8"	2592 x 1920	2.0 x 2.0	12 bits	24 bits	72 db	2.0	Windows, USB 2.0	PP.5000f
ProPad-12	12.0	1/2.3"	4072 x 3176	1.33 x 1.33	8 bits	24 bits	60 db	--	Windows, USB 2.0	PP.5000f
ProPad-WiFi	5.0	1/2.5"	1280 x 720	2.2 x 2.2	12 bits	24 bits	61 db	1.0	Windows, Apple, WiFi, Android	PP.5000-WiFi

All ProPad models are supplied with a C-mount objective that fits the standard 23.2 mm trinocular tubes. The PP.2000f, PP.5000f and PP.12000f are supplied with ImageFocus Plus software. The PP.5000-WiFi is supplied with ImageFocus Alpha. Only suitable for straight photo tubes



# SOFTWARE

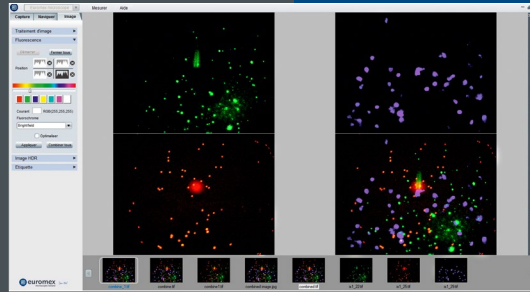
The software is compatible with all cameras mentioned in table below. Besides live imaging the software captures images in .jpeg, .tif, .bmp or .dicom formats or video recording in .avi format

FREE UPDATES  
AVAILABLE ON  
EUROMEX.COM

IMAGE FOCUS 4	
DC.1300c	

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

IMAGE FOCUS ALPHA	
DC.3000-Pro	DC.5000-WiFi
DC.5000-Pro	DC.3000s
DC.10000-Pro	DC.6000s
DC.18000-Pro	DC.20000s
VC.3038	



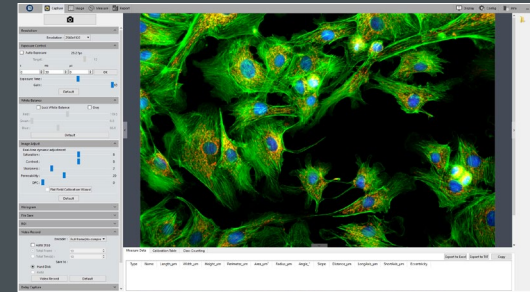
## ImageFocus 4 software

ImageFocus 4 has a wide range of functions:

- Measurements can be done on still and live image
- Images can be saved in .jpg, .tif, .bmp or .dicom formats as well as .avi format videos
- The brightness, contrast and saturation of captured images can be adjusted
- Camera parameters for exposure time, white balance and color control are easily accessible
- The software also has specific functions for fluorescence such as combining captured fluorescence images
- Compatible with Windows 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

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

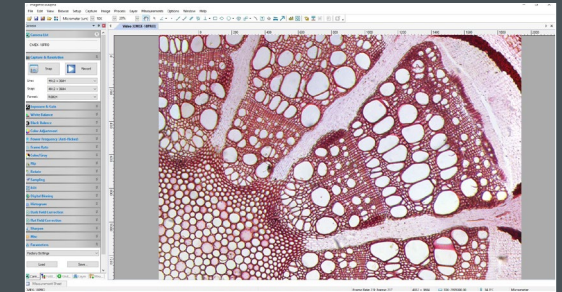


## ImageFocus Plus software

ImageFocus Plus has a wide range of functions:

- Measurements can be done on still and live image
- Images can be saved in .jpg, .tif, .bmp or .dicom formats as well as .avi and mpeg-4 format videos
- The brightness, contrast and saturation of captured images can be adjusted
- Camera parameters for exposure time, white balance and color control are easily accessible
- The software also has specific functions for fluorescence such as combining captured fluorescence images
- Compatible with Windows 7, 8 and 10, both 32 and 64 bits configuration. A Mac OS version is also available
- PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2GB memory or more, 17" screen

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



## ImageFocus Alpha software

ImageFocus Alpha has a wide range of functions:

- Measuring, segmentation & counting, stitching of images, extended depth of focus, etc
- Images can be saved in .jpg, .tif, .bmp or .dicom formats as well as .avi format videos
- The brightness, contrast and saturation of captured images can be adjusted
- Camera parameters for exposure time, white balance and color control are easily accessible
- The software also has specific functions for fluorescence such as combining captured fluorescence images
- Compatible with Windows 7, 8 and 10, both 32 and 64 bits configuration. A Mac OS version is also supplied (with a few differences in features)
- PC requirements: Intel Core2 2.8 GHz or higher or equivalent, 2GB memory or more, 17" screen

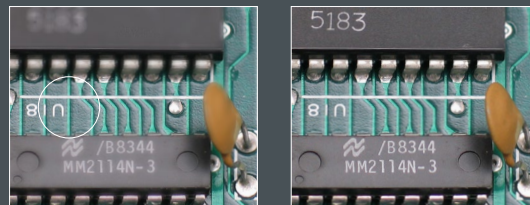
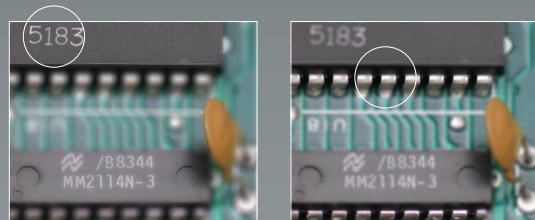
One language can be selected during initial installation of the ImageFocus Alpha software English, Catalan, French, German, Indonesian, Italian, Japanese, Korean, Polish, Russian, Simplified Chinese, Spanish, Thai, Traditional Chinese, Turkish

## IMAGE STITCHING

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

## EXTENDED DEPTH OF FOCUS

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



# ADAPTERS

FOR ALL  
MICROSCOPE  
CAMERAS



● AE.5130

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

<sup>(1)</sup> Leica DM, 35 mm to 25.4 mm C-mount, stainless steel

<sup>(2)</sup> Olympus CX, CX2, BX, BX2, IX, MX, GX, SZX, STM, 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> Zeiss 60N-C, 60N-T2 photo ports of Axio examiner, Axio Imager, Axio Lab, Axio Observer, Axio Scope, Axio Zoom, Stemy 508 and SteREO Discovery

<sup>(5)</sup> Nikon E100, E200, 50i, 55i, 80i, 90i, Ni series, Ti Series, SMZ800, SMZ1000, SMZ15000, 38 mm to 25.4 mm C-mount, stainless steel

● AE.9835-L



## STANDARD PLUG & PLAY

C-mount adapters for standard Ø 23.2 mm tube

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

\*for increased light efficiency



● DC.1355



● DC.1330 / DC.1335



● DC.1324



● AE.5130



● AE.5120-2

## PHOTO PORT ADAPTERS

Suitable for Euromex microscopes with a photo port such as Oxion, NexusZoom 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

**NZ.9833** C-mount adapter with 0.33x objective for NexusZoom microscopes and 1/3" cameras

**NZ.9850** C-mount adapter with 0.5x objective for NexusZoom microscopes and 1/2" cameras

**SB.9850** C-mount adapter with 0.5x objective for StereoBlue 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 tube with built-in 2x magnification lens. Needs T2 adapter

**AE.5120-2** Standard 23.2 mm diameter tube for Oxion photo port (x)

**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



accessories



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## illumination solutions

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

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

# illumination solutions

for stereo microscopy



## ILLUMINATION SOLUTIONS

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



## Illumination solutions

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

A powerful multifunctional 150 W halogen (LE.5211) and 30 W PowerLED cold light source is ideal for the advanced requirements of numerous applications in life and materials science. The intensity is adjustable and has a built-in forced air cooling. The LE.5211 and LE.5211-LED light sources require a light fiber conductor such as the single LE.5213, dual LE.5214, triple LE.5215 or the LE.5239 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.*
<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	150 (h) x 150 (w) x 230 mm (d)
<b>Weight</b>	2.8 kg	3.9 kg
<b>Model</b>	<b>LE.5211</b>	<b>LE.5211-LED</b>

\* 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 kinds 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.*
<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>	115 (h) x 320 (w) x 215 mm (d)
<b>Weight</b>	3.8 kg
<b>Model</b>	<b>LE.5210</b>

\* 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>	80 (h) x 110 (w) x 165 mm (d)
<b>Weight</b>	2.0 kg
<b>Model</b>	<b>LE.5209</b>

### ECONOMICAL AND COMPACT DUAL 3 W LED • LIGHT SOURCE

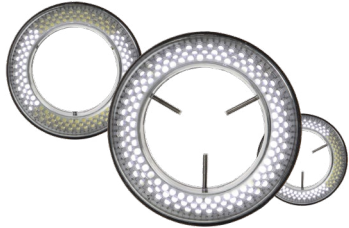
Economical dual LED intensity adjustable light source with two 44 cm flexible gooseneck arms, each mounted with a 3 W LED. Ideal for applications in life and materials sciences, various industrial applications and for stereo microscopy



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

### 144 LEDs RING LIGHT SOURCE • LE.1973

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



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

### COMPACT 72 LEDs • LE.1974

Compact 20,000 lux LED ring light source



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



● LE.1992 ● LE.1993

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

### PROFESSIONAL HIGH POWER LED 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



● LE.1992 ● LE.1993

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

### ILLUMINATION STATION LE.5212

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

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

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





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

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

Ring illumination	Fluorescent 40 kHz ring, fixed intensity
Color temperature	5,200 K
Illuminance	6,500 lux at 100 mm distance
working distance:	35-160mm
Mounting	48 mm with adapter for ZE series microscopes
Power supply	230-250 V
External diameter	100 mm
Model	<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.1980 AND LE.1981

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

### FOR LE.1990 AND LE.1991

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

### FOR LE.5212

- LE.5260** Interchangeable self-sustaining gooseneck-type guide with a white 6,500 K high-power LED for NZ.9018, LE.5207 or LE.5212, 1 pc (A)
- LE.5261** Interchangeable self-sustaining gooseneck-type guide with a 365 nm high-power UV-LED for NZ.9018, LE.5207 or LE.5212, 1 pc (B)
- LE.5262** Interchangeable self-sustaining gooseneck-type guide with a 395 nm high-power Violet-LED for NZ.9018, LE.5207 or LE.5212, 1 pc (C)
- LE.5263** Interchangeable self-sustaining gooseneck-type guide with a 420 nm high-power Violet-LED for NZ.9018, LE.5207 or LE.5212, 1 pc (D)
- LE.5264** Polarization filter, screw on type for Interchangeable self-sustaining gooseneck-type guides for NZ.9018, LE.5207 or LE.5212, 1 pc

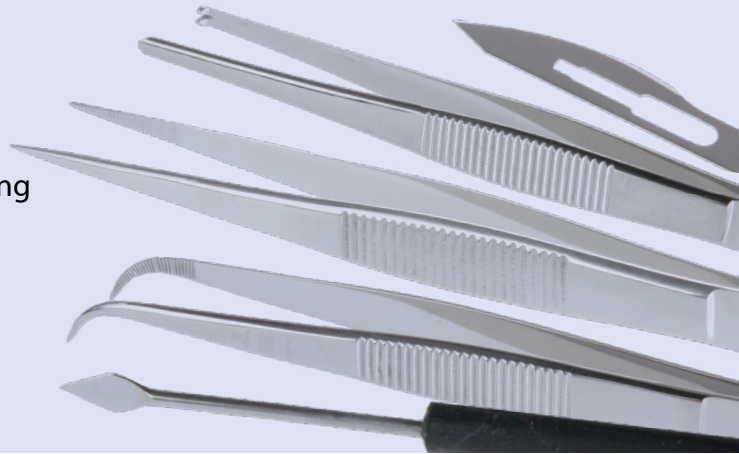
### FOR LE.1863

- SL.1864** Spare fluorescence lamp

*WD = working distance*

## 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

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



## SCISSORS AND BLADES

- PB.5080** Dressing scissors with blunt/sharp tip, length 14 cm
- PB.5084** Dissecting scissors, sharp tips, length 11 cm
- PB.5092** Scalpel with blunt tip, length 15 cm
- PB.5094** Scalpel handle no. 4 (for blades PB.5095 and PB.5096)
- PB.5095** Scalpel blades with sharp tip, 5 pieces per set
- PB.5096** Scalpel blades with blunt tip, 5 pieces per set
- PB.5103** Strop, double sided for stropping of scalpels, microtome knives. Includes stropping paste
- PB.5105** Razor plano/concave, for sectioning. With plastic handle
- PB.5106** Microtome knife plano/concave. With fixed handle, length 17 cm



## HANDHELD MICROTOMES

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





## PREPARATION ACCESSORIES



### 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

#### 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

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

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



● PB.5112

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

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



● PB.5114

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

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



● PB.5115

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

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



● PB.5125



● PB.5110



● PB.5111



## MICROSCOPE PREPARED SLIDES



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

## sets with 25 slides for education

### histology, zoology and botany set

#### PB.5211 FOR EDUCATION

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

#### HISTOLOGY

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

#### ZOOLOGY

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

#### BOTANY

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

## histology, zoology and botany set

#### PB. 5212 FOR EDUCATION

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

#### HISTOLOGY

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

#### ZOOLOGY

- SZ.1520** Paramecium, w.m
- SZ.1625** Schistosoma Japonicum, fluke eggs, bilharziose
- SZ.1630** Taenia, tapeworm cattle, mature proglottid, w.m
- SZ.1635** Ascaris megalocephala, horse roundworm, female + male, c.s
- SZ.1708** Apis mellifica, honey bee, mouth parts
- SZ.1725** Periplaneta, cockroach, mouth parts of chewing type
- SZ.1730** 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 rhizom
- SB.2310** Cyrtomium, holly fern, section
- SB.2386** Oscillatoria, blue-green algae

#### USED ABBREVIATIONS

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

## histology, zoology and botany set

#### PB. 5213 FOR EDUCATION

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

#### HISTOLOGY

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

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

## ZOOLOGY

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

## BOTANY

- SB.2011** Zea mays, corn root tip with hairs, l.s  
**SB.2020** Helianthus, sunflower, old root, c.s  
**SB.2025** Monocot/dicot plant roots, zea mays/helantius, c.s  
**SB.2040** Solanum tuberosum, potato, starch grains  
**SB.2075** Tilia, lime tree, one year stem, c.s  
**SB.2091** Hydrilla stem, c.s  
**SB.2100** Pelargonium hortorum, geranium, stem c.s  
**SB.2337** Mniium, antheridial 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

# histology, zoology and botany set

## PB. 5214 FOR EDUCATION

Set with 25 microscopy slides for education: histological samples of mammals, zoology and botany.

All microscope slides are supplied in a plastic box for 25 slides. The set contains:

## HISTOLOGY OF MAMMALS

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

## ZOOLOGY

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

## BOTANY

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

# histology, zoology and botany set

## PB. 5215 FOR EDUCATION

Set with 25 microscopy slides for education: histological samples of mammals, zoology and botany.

All microscope slides are supplied in a plastic box for 25 slides. The set contains:

## HISTOLOGY

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

## ZOOLOGY

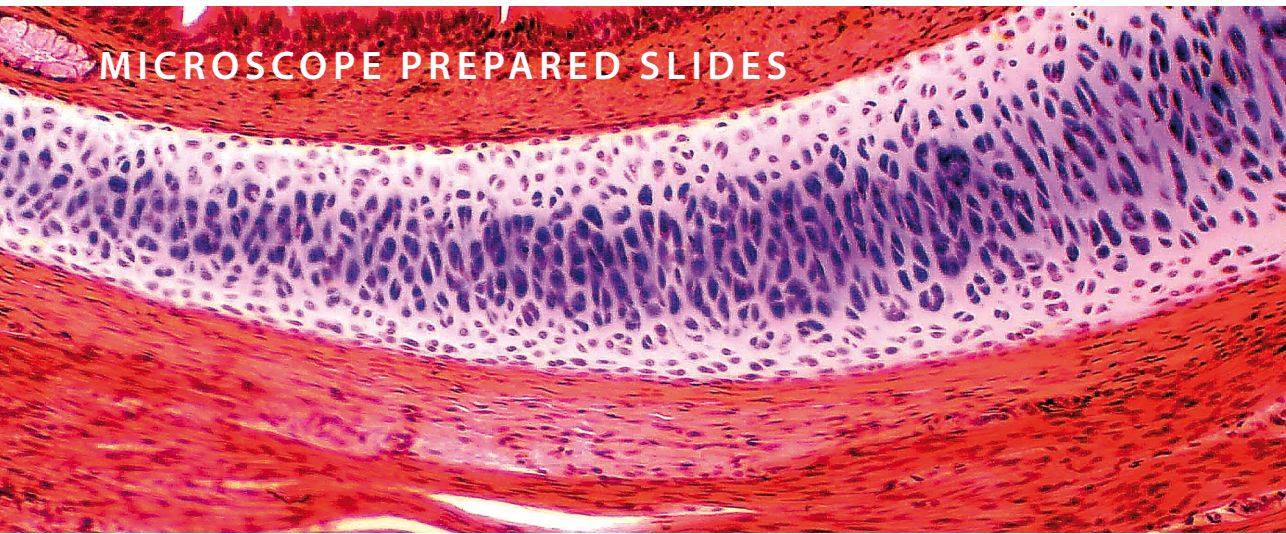
- SZ.1610** Planaria, flat worm, injected intestinal tube, w.m  
**SZ.1636** Ascaris megaloccephala, horse roundworm, mitosis eggs  
**SZ.1760** Ctenocephalus canis, dog flea, w.m  
**SZ.1770** Tetranychus, red spider mite, w.m  
**SZ.1930** Bird, wing and down feather, section  
**SZ.1940** Chicken,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



## sets with 23 slides for education

### mammal histology set

#### PB.5221 SET FOR EDUCATION

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

#### EPITHELIUM AND CONNECTIVE TISSUES

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

#### RESPIRATORY, BLOOD CIRCULATION AND ENDOCRINE SYSTEM

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

#### DIGESTIVE SYSTEM

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

#### URINARY AND GENITAL SYSTEM

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

#### NERVOUS SYSTEM AND SENSORY ORGANS

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

### mammal histology set

#### PB.5222 SET FOR EDUCATION

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

#### EPITHELIUM AND CONNECTIVE TISSUES

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

#### RESPIRATORY, BLOOD CIRCULATION AND ENDOCRINE SYSTEM

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

#### DIGESTIVE SYSTEM

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

#### URINARY AND GENITAL SYSTEM

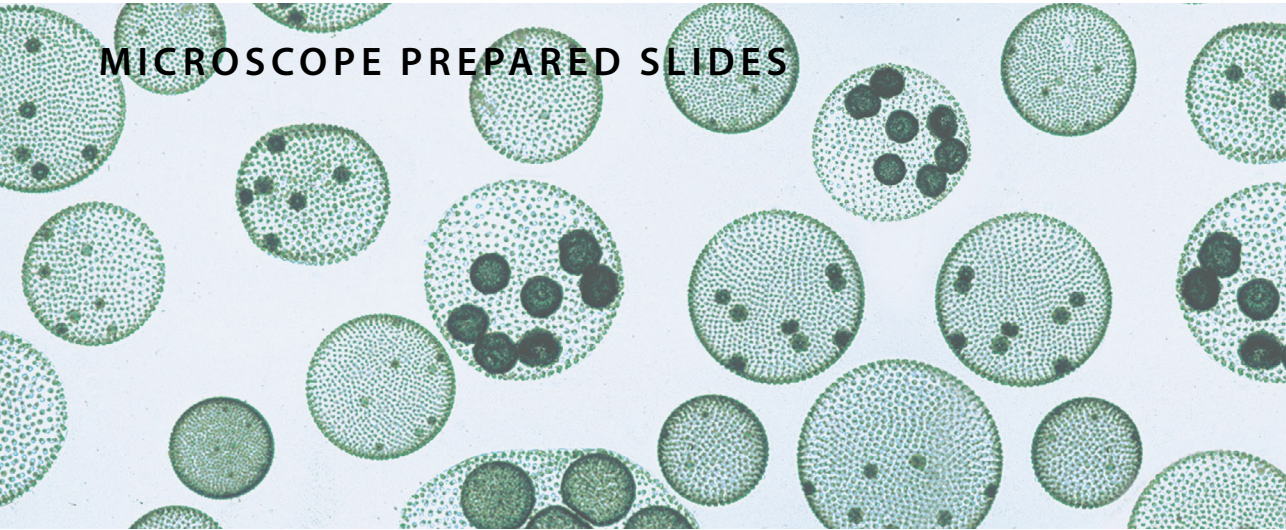
- SH.1315** Kidney, rat, sec. cortex & medulla
- SH.1360** Sperm, human, smear
- SH.1375** Human chromosomes in blood, male
- SZ.1724** Fruit fly, drosophila, giant chromosomes of salivary gland, w.m

#### NERVOUS SYSTEM AND SENSORY ORGANS

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



## MICROSCOPE PREPARED SLIDES



### set for hobby 10 slides

#### zoology and botany set

##### PB.5204 SET FOR HOBBY

Set with 10 prepared microscopy slides for hobby: zoology and botany.

All microscope slides are supplied in a plastic box with transparent cover for 25 slides. The set contains:

##### ZOOLOGY

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

##### BOTANY

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

##### USED ABBREVIATIONS

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

### set for hobby 25 slides

#### slides of histology, zoology and botany

##### PB.5218 SET FOR HOBBY

Set with 25 prepared microscopy slides for hobby: zoology and botany.

All microscope slides are supplied in a plastic box with transparent cover for 25 slides. The set contains:

##### HISTOLOGY OF HUMAN AND MAMMALS

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

##### BOTANY

- SB.2009** *Allium cepa*, onion, mitosis root tip, l.s
- SB.2055** *Zea mays*, corn, stem, 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 cattle, mature proglottid, w.m
- SZ.1635** *Ascaris megalocephala*, horse roundworm, female and male, c.s
- SZ.1640** *Lumbricus*, earthworm, c.s
- SZ.1655** *Daphnia* sp., water flea, w.m
- SZ.1705** *Apis mellifica*, honey bee, posterior leg, w.m
- SZ.1710** *Apis mellifica*, honey bee compound eye, c.s
- SZ.1719** *Musca domestica*, house fly, wing w.m
- SZ.1722** *Culex pipiens*, house mosquito, female, mouth parts
- SZ.1724** Fruit fly, *Drosophila*, giant chromosomes of salivary gland, w.m

## MICROSCOPE PREPARED SLIDES



## individual euoslides 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 EUOSLIDES

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

## individual euoslides 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 storage box (e.g. 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

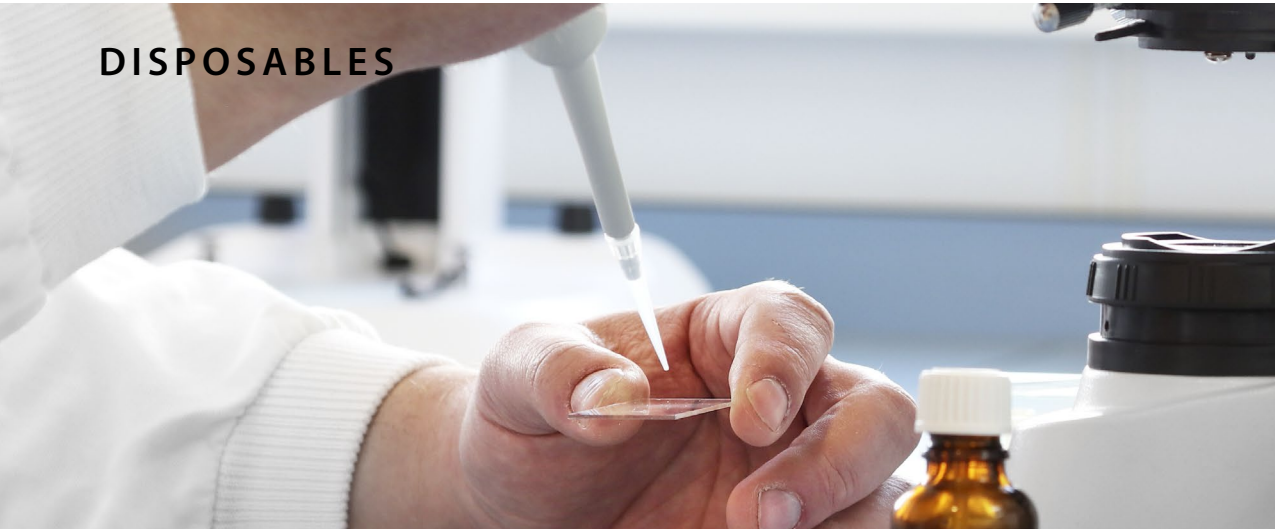
- SB.2377** Diatoms, w.m
- SB.2380** Spirogyra sp. in conjugation
- SB.2384** Volvox sp., w.m

### BACTERIA

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



## DISPOSABLES



### disposables

#### MICROSCOPE SLIDES AND COVER GLASSES

- PB.5150** Microscope slides 76 x 26 mm, half white glass, cut edges. 50 pieces
- PB.5155** Microscope slides 76 x 26 mm white glass, ground edges. 50 pieces
- PB.5157-W** Microscope slides 76 x 26 mm, ground white frosted side, 50 pieces
- PB.5157-B** Microscope slides 76 x 26 mm, ground blue frosted side, 50 pieces
- PB.5160** Microscope slides 76 x 26 mm with concavity, ground edges. 10 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13-0.17 mm. 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13-0.17 mm. 100 pieces
- PB.5170** Cover glasses Ø18 mm, thickness 0.13-0.17 mm. 100 pieces

#### MICROSCOPE SLIDE BOXES

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



● PB.5150

● PB.5180

● PB.5168 / PB.5170

## STAINS

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



#### MISCELLANEOUS ACCESSORIES

- PB.5200** Staining trough for 10 slides
- PB.5210** Fine pointed brush
- PB.5245** Lens paper. 100 sheets
- PB.5250** Solid paraffin. Melting point 60°C, 200 grams
- PB.5255** Immersion oil, refractive index nD = 1.482. (25 ml)
- PB.5265** Entellan, quick drying Canada balsam. In bottle (25 ml)
- PB.5274** Isopropyl alcohol 99%. In bottle (200 ml)
- PB.5277** Formalin 40%, fixing agent. In bottle (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs
- PB.5276** Microscope maintenance and servicing kit, 16pcs: cleaning brush, 6 pcs screwdriver set, air blower, 3 pcs Allen key, 1.5, 2, 2.5 mm, lens cleaning fluid 20 ml, cleaning cloth 140 x 140 mm, 100 pcs lens tissue sheets, tube of maintenance grease, 10 ml bottle of oil, packed in a nice toolbox



● PB.5276



● PB.5280 / PB.5274



● PB.5210

● PB.5245

#### (DISSOLVED) STAINS

Supplied in 25 ml bottles

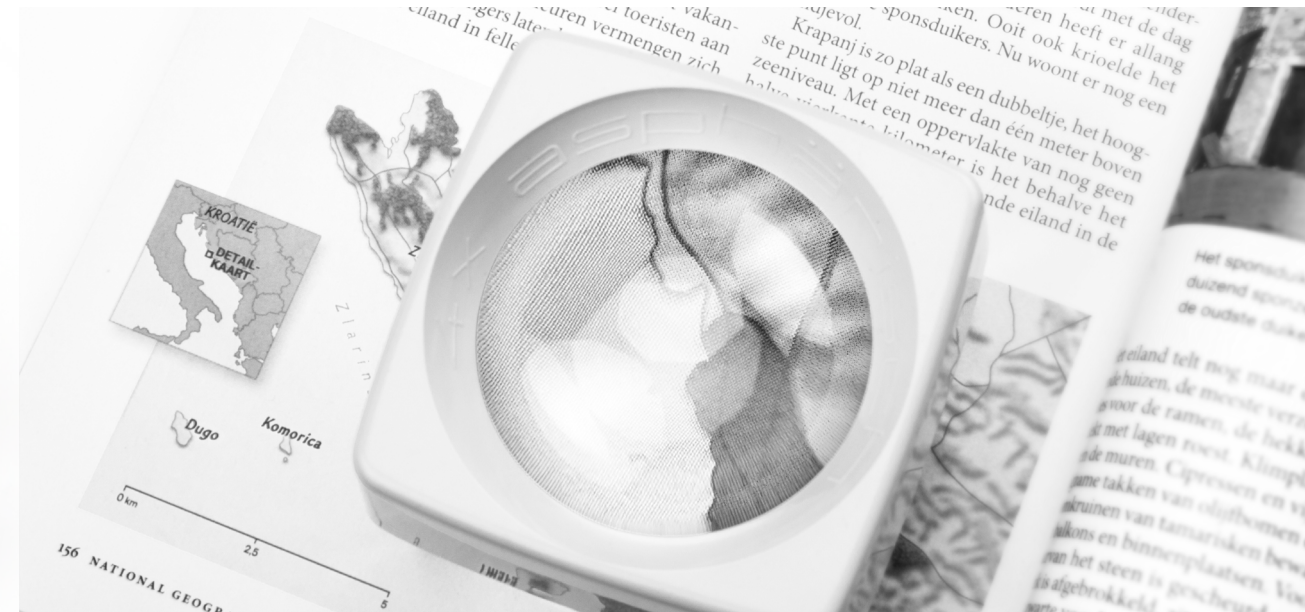
- PB.5280** Azo carmine-G. Biological stains for animal tissues. Also suitable for bacteria pigmentation
- PB.5283** Eosin yellow. Stain for general overall-view coloring
- PB.5286** Haematoxylin according to Ehrlich. General purpose nuclear stain
- PB.5289** Astra Blue. Stain for vegetal cells. To be 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

# other products

## optical instruments



optical instruments



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 382  
REFRACTOMETERS • PAGE 386  
POLARIMETERS • PAGE 393  
SPECTROSCOPES • PAGE 394  
PATHOLOGY SCANNER • PAGE 396**



## 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



### FOLDING MAGNIFIERS

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



● PB.5032

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



● PB.5016

### FOLDING MAGNIFIERS WHITE LED ILLUMINATION

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



● PB.5034-LED

### FOLDING MAGNIFIERS WHITE LED AND UV ILLUMINATION

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



● PB.5034-LUV



# MAGNIFIERS & MEASURING MICROSCOPES

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



## magnifiers & measuring microscopes

### TABLE MAGNIFIERS

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

### MISCELLANEOUS MAGNIFIERS

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



### MEASURING MAGNIFIERS WITH RETICLE

- PB.5044** Measuring magnifier 7x.  
Eyepiece Ø 18 mm. Field of view 24 mm.  
Measuring scale 10-0-10 mm divided into 0.1 mm and crosshairs
- PB.5045** Measuring magnifier 7x.  
Eyepiece Ø 18 mm. Field of view 24 mm.  
Measuring scale 10-0-10 mm divided into 0.1 mm and crosshairs. 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 30 mm.  
Measuring scale 15-0-15 mm with 0.1 graduation.  
White LED-illumination



### MEASURING MICROSCOPES

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



# refractometers



refractometers



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

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

**REFRACTOMETERS • PAGE 374**  
**ABBE REFRACTOMETER • PAGE 377**

# REFRACTOMETERS

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



● Analog refractometer

● Digital refractometer

## refractometers handheld and table models

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

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

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

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

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

Application	Art no	Range	Accuracy	Remarks	ATC	Handheld model	Table model	Analog	Digital
Concentrations of sugar in marmalades, fruits, syrups, wine and monitoring of oil emulsions	RF.6190	0-90 Brix	0.2	3 scales: 0-42 / 42-71 / 71-90 Brix		•		•	
	RF.6510	0 - 10 Brix	0.1		•	•		•	
	RF.6520	0 - 20 Brix	0.1		•	•		•	
	RF.6532	0 - 32 Brix	0.2		•	•		•	
	RF.6562	28 - 62 Brix	0.2		•	•		•	
	RF.6580	0 - 80 Brix	0.5		•	•		•	
	RF.6582	45 - 82 Brix	0.5		•	•		•	
	RF.6592	58 - 92 Brix	0.2		•	•		•	
	RF.6635	0 - 150 °Oe	1	Oechsle units	•	•		•	
		0 - 35 Brix	0.2	Sugar concentration					
	0 - 27 °KMW	0.2	Babo units						
	0 - 22 %	0.2	% volume						
	0 - 37 CNM	0.5							
	RD.6735	0 - 150 °Oe	1		•	•			•
		0 - 35 Brix	0.1						
		0 - 25 °KMW	0.1						
		0 - 22 %	0.1						
	RD.6645	0 - 45 Brix	0.1		•	•			•
		1.33 - 1.41 R.I.	0.0003						
	RD.6666	0 - 80 Brix	0.5		•	•			•
		1.33 - 1.51 R.I.	0.0005						
	RD.6667	58 - 92 Brix	0.2		•	•			•
		1.43 - 1.52 R.I.	0.0003						
Honey	RF.6642	13 - 25 %	0.1	Honey moisture	•	•		•	
	RF.6644	58 - 92 Brix	0.5		•	•		•	
		38 - 43 °Be	0.5						
		12 - 27 %	1	Water					
Concentration of sugar/alcohol %	RF.6627	0 - 25 %	0.2	% volume	•	•		•	
		0 - 40 Brix	0.2						
		0 - 20 Baume	0.2						
Salinity and concentration of sugar	RF.6610	0 - 100 0/00	1		•	•		•	
		0 - 10 Brix	0.1						
		1.00 - 1.07 R.I.	0.005						
	RF.6628	0 - 28 %	0.2		•	•		•	
	RD.6728	0 - 28 %	0.1	% NaCl	•	•		•	
	0 - 45 Brix	0.1							
	1.33 - 1.41 R.I.	0.0003	Only for sugar/salt						



Application	Art no	Range	Accuracy	Remarks	ATC	Handheld model	Table model	Analog	Digital
Clinical applications Proteins	RF.6612	0 - 12 g/dl	0.2	Proteins in serum	•	•	•		
		1.00 - 1.05 sg	0.002	Urine specific gravity					
		1.333 - 1.360 R.I	0.0003						
	RF.6614	2 - 14 g/dl	0.1	Proteins in serum	•	•	•		
		1.00 - 1.06 sg	0.001	Urine specific gravity (dog)					
		1.00 - 1.06 sg	0.001	Urine specific gravity (cat)					
	RD.6712	0 - 12 g/dl	0.1	Proteins in serum	•	•			•
		1.00 - 1.05 sg	0.001	Urine specific gravity					
		1.33 - 1.39 R.I.	0.0001						
	RD.6714	0 - 14 g/dl	0.1	Proteins in serum (dog)	•	•			•
			0.1	Proteins in serum (cat)					
		1.00 - 1.06 sg	0.001	Urine specific gravity (dog)					
1.00 - 1.06 sg		0.001	Urine specific gravity (cat)						
1.33 - 1.39 R.I.		0.0001							
Battery Acid/Coolant	RF.6650	1.10 - 1.40 sg	0.01	Battery fluids	•	•		•	
		-50 / 0 °C	5	Ethylene glycol G13					
		-50 / 0 °C	5	Propylene glycol G11/12					
		-40 / 0 °C	10	windshield washer fluid					
	RD.6730	1.0 - 1.50 sg	0.01	Battery fluids	•	•		•	
		-50 / 0 °C	0.5	Ethylene glycol G13					
		-50 / 0 °C	0.5	Propylene glycol G11/12					
		-40 / 0 °C	0.5	windshield washer fluid					
Identification of precious stones	RF.6381	1.30 - 1.81 °C.R.I.	0.01				•	•	

## ACCESSORIES AND SPARE PARTS



● RF.6381

- 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)



● 98.490

## Abbe laboratory refractometer substance identification

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

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

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

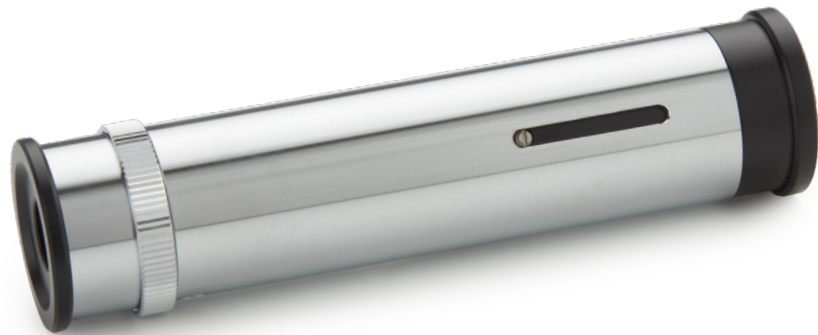
The Abbe refractometer can be connected to a water bath for measuring at a controlled temperature. During the use of this type of refractometer the use of a cold light source such as the LE.5209 is recommended. This Abbe table refractometer has scales for measurement of sugar concentrations and refractive indices. Delivered with carrying case, digital thermometer, calibration plate and adjusting tool



### Substance identification of sugar concentration

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

# polarimeters & spectrosopes



## polarimeters & spectrosopes

A polarimeter measures the rotation angle of polarized light traveling through an optically active substance.

The rotation angle of the polarization plane of linear polarized light is different for each optical active substance as described in the Law of Biot

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

Spectrosopes are used to visualize the light spectrum of light sources

## POLARIMETERS



### polarimeter

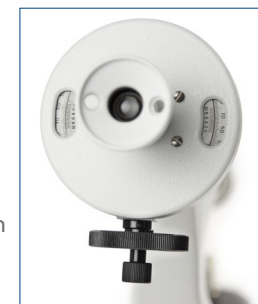
● 99.400-LED

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

#### HIGHLIGHTS

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

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



#### ACCESSORIES FOR 99.400

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

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



# SPECTROSCOPES

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



## handheld spectrosopes

### SP.5200

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

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



• SP.5200

MODEL	Dimensions	Weight (grams)	Adjustable slit	Comparison prism	Angle dispersion	Linear dispersion	Wavelength scale	589 nm indication	With 5 glass cuvettes
SP.5200	h50x115xp23	250	0-1 mm	•	C-F 7°	60 mm	•	•	•

### SP.5155

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

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



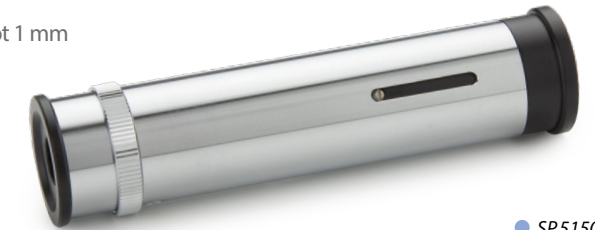
• SP.5155

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

### SP.5150

Handheld spectroscope with adjustable slit from 0 tot 1 mm

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



• SP.5150

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

### SP.5100

Handheld spectroscope with fixed slit

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



• SP.5100

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



## 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 microscopy analysis software

PS.1001  
70 (h) x 150 (w) x 260 mm (d) | 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

#### SPECIFICATION

Resolution	10,000 x 10,000 dpi
Scan mode	Color
Dynamic Range	3.8
Scanning Area	24.3 x 36.5 mm (H x W)
Scanning medium	76 x 26 mm slides
File Format	Saving in JPG, TIFF format
Light Source	Transmission white LED
Operating System	Windows 7/8/10 Intel-based Mac OS X 10.5/10.6 /10.7/10.8
Power supply	100- 240 AC Adapter, 12 V 1.5 A
Supplied with	Double slide holder, 100-240 V power supply, USB-2.0 cable, PathoView scanning software and user manual
Model	<b>PS.1001</b>

#### MODELS

PS.1001	PathoScan 10,000 DPI slide scanner
PS.3001	Double slide holder

# choose the right euromex microscope

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

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

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

## UNIVERSITY LABS FIELD OF APPLICATION RECOMMENDED MODELS

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

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

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



LIFE SCIENCE  
LABORATORIES

FIELD OF APPLICATION

RECOMMENDED MODELS

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

LIFE SCIENCE  
LABORATORIES

FIELD OF APPLICATION

RECOMMENDED MODELS

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

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

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

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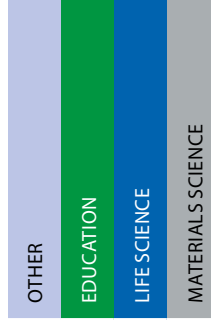


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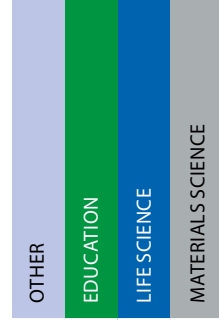
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## HEADQUARTERS

### Euromex Microscopen bv

Papenkamp 20  
6836 BD Arnhem  
The Netherlands  
Tel: +31 (0) 26 323 22 11  
info@euromex.com

## EUROPEAN SALES OFFICE

### Euromex Microscopen Spain, S.L

Carretera de Barcelona 88, Entresuelo  
Esc. B - Local 9  
08302 Mataró, Spain  
Tel: +34 (0) 937 415 609  
info@euromex.com

**[www.euromex.com](http://www.euromex.com)**