

by euromex

IOS Plan

## ENGLISH

MICROSCOPES FOR EDUCATION AND LABORATORIES MicroBlue EcoBlue BioBlue EduBlue BioBlue.Lab

BioBlue.180





## BIOLOGICAL SERIES





# Microscopes for education

Microscopes for education need to be easy-touse and student-friendly, which means able to withstand extensive use and rough handling. High quality, yet affordably priced Euromex microscopes specifically match these demands due to the well-thought construction and usage of top-class materials

Extensive experience of Euromex optical engineers has contributed to the development and implementation of the finest optical components and guaranteed performance, which means clear bright images at every magnification

The outstanding optical performance of the ergonomic Euromex BlueLine microscopes enables long productive working sessions for students for beginner, intermediate, and advanced science teaching classes

# Microscopes for laboratory research and advanced education

Euromex BlueLine offers a high-quality range of microscope models, which are specifically meant for laboratory and higher education use. BioBlue. Lab is a state-of-the art instrument and is largely used for common contrasting methods like brightfield and phase contrast

The enhanced Infinity Optical Systems ensure a high performance microscopic image, perfectly suitable for Life Science research as well as advanced Life Science education



## IOS BIOLOGICAL SERIES



## BIOBLUE.LAB

## STEREOZOOM SERIES



# MicroBlue

MADE IN HOLLAND

- Entry-level microscopes
- Monocular and binocular models
- Reversed nosepiece
- LED and NeoLED<sup>™</sup> illumination

MicroBlue

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- Cordless operation
- Ergonomic carrying grip
- 5 years warranty

MicroBlue is an entry-level microscope and is especially appreciated when budget is limited. The monocular model comes with a fixed lens condenser and a plain stage

The binocular versions are supplied with an Abbe condenser and a mechanical X-Y stage. All models are equipped with 35 mm achromatic objectives.

The built-in rechargeable batteries are replaceable and therefore enable cordless operation

Monocular model MB.1001



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## FEATURES

Body	Aluminium die-casting metal frame
Optical system	Finity optical system
Focusing	200 graduations, 15 μm per graduatio 3 mm per rotation total travel approxi
	15 mm. With friction adjustment
Revolving nosepiece	Reversed quadruple nosepiece for binocular models.
	Reversed triple nosepiece for
	monocular models
Stage	Mechanical X-Y stage, 115 x 100 mm.
	Travelling range 55 x 20 mm.
	Plain stage with object clamps, 105 x
Observation tube	Monocular and binocular 45° inclined
Objectives	Achromatic (anti-fungus)
Eyepieces	WF 10x / 18 mm (anti-fungus)
Operating voltage	AC 100-240 V, 50/60 Hz
Batteries	Built-in, rechargeable
Height	350 mm
Weight	Approximately 2 kg (monocular),
	2.8 kg (binocular)

## MODELS

	Monocular	Binocular	Maximum objectives	4/10/S40x objectives
MB.1001	•		3	•
MB.1652		•	4	•
MB.1152		•	4	•



 
 S60x
 S100x
 Mechanical vojective
 LED
 NeoLED

 objective
 X-Y stage
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# EcoBlue

- Economical microscopes for education
- Monocular, binocular and trinocular models
- Digital and polarisation models available
- LED and NeoLED<sup>™</sup> illumination
- Ergonomic carrying grip
- 5 years warranty

The EcoBlue series offer quality biological microscopes at affordable prices. These modern microscopes were specifically developed for education with a special attention for ergonomics and an outstanding price/quality ratio

Monocular model EC.1001

Polarisation







# Blue 0 8 euromex

## FEATURES

Body	Aluminium die-casting metal frame
Optical system	Finity optical system
Focusing	200 graduations, 12.5 µm per gradua
	2.5 mm per rotation total travel appr
	15 mm. With friction adjustment
Revolving nosepiece	Forwarded quadruple nosepiece
Stage	Mechanical X-Y stage, 130 x 125 mm.
	Travelling range 70 x 28 mm.
	Plain stage with object clamps, 123 x
	Round stage 129 mm, 360° rotatable
Observation tube	Monocular 45° inclined tube.
	Binocular and trinocular 30° inclined
Objectives	Achromatic (anti-fungus)
Eyepieces	WF 10x / 18 mm (anti-fungus)
Operating voltage	AC 100-240 V, 50/60 Hz
Batteries	Built-in, rechargeable (for models EC
Height	372 mm
Weight	Approximately 3 kg

## MODELS

	Monocular	Binocular	Trinocular	Digital	S60x objective
EC.1001	•				
EC.1101	•				
EC.1601	•				•
EC.1051	•				
EC.1151	•				
EC.1152		•			
EC.1652		•			•
EC.1153			•		
EC.1653			•		•
EC.1005	•			•	
EC.1105	•			•	
EC.1605	•			•	•
EC.2001-P	•				
EC.2101-P	•				
EC.2601-P	•				•

(1) Integrated mechanical stage (2) With an external battery charger (3) Polarisation models supplied with halogen illumination

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# BioBlue

- Monocular, binocular and trinocular models
- Reserved quadruple nosepiece
   for semi plan objectives
- Models with integrated digital camera
- Integrated mechanical stage
- Polarisation models available
- LED and NeoLED<sup>™</sup> illumination

BioBlue

- Cordless operation
- 10 years warranty

The beautiful stylish design of the BioBlue series stands out among all other microscopes of this kind.

It has been especially designed for biology classes in educational institutes and small laboratories and offer a full range of models

Binocular model BB.4260

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Monocular model BB.4240

The ergonomic carrying grip enables easy transportation

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The DIN WF 1 mm DIN obje image. When and centered The 120 x 120 70 x 28 mm n the specimen





## Binocular head



Digital monocular head



## Trinocular head



Digital binocular head



Discussion head



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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. When changing magnification the image remains perfectly in focus

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

DIMENSIONS

MONO	BINO			IZI NeoLED	HALOGEN
360°	TRANSMITTED	POLARIZED	ABBE	DIGITAL	USB
BATTERY	100-240V	100-240V	MARRANTY		

## FFATURES

LATONES	
Body	Aluminium die-casting metal frame
Optical system	Finity optical system
Focusing	200 graduations, 2 μm per graduation, 0.4 mm per rotation total travel approximately 23 mm With friction adjustment
Revolving nosepiece	Reversed quadruple nosepiece
Stage	Mechanical X-Y stage, 130 x 130 mm Travelling range 70 x 28 mm Plain stage with object clamps, 120 x 120 mm Round stage 129 mm, 360° rotatable
Observation tube	Monocular 45° inclined tube Binocular and trinocular 30° inclined tubes
Objectives	Semi plan (anti-fungus)
Eyepieces	WF 10x / 18 mm (anti-fungus)
Operating voltage	AC 100-240 V, 50/60 Hz
Batteries	Built-in, rechargeable
Height	360 mm
Weight	Approximately 4 kg

## MODELS

	Monocular	Binocular	Trinocular	Digital	S60x objective	S100x objective	Mechanical X-Y stage	LED	NeoLED	Polarisation <sup>(1)</sup>
BB.4200	•							•		
BB.4220	•						•	•		
BB.4240	•				•		•	•		
BB.4250	•					•	•	•		
BB.4260		•				•	•		•	
BB.4263		•			•		•		•	
BB.4243			•		•		•		•	
BB.4253			•			•	•		•	
BB.4205	•			•				•		
BB.4225	•			•			•	•		
BB.4245	•			•	•		•	•		
BB.4255	•			•		•	•	•		
BB.4267		•		•		•	•		•	
BB.4269		•		•	•		•		•	
BB.4220-P	•									•
BB.4240-P	•				•					•
BB.4260-P		•				•				

(1) Polarisation models supplied with halogen illumination

# Magnification

## How to calculate the magnification of a microscope?

The optical system of a microscope has two main components that produce the total magnification of the instrument, the eyepiece(s) and objective(s). Eyepieces typically magnify 10x, objectives typically magnify 1 to 100x

The total system magnification can be calculated as follows: System magnification = eyepiece magnification x objective magnification

e.g. when selecting a 40x objective and using 10x eyepiece the total system magnification will be 400x

Stereo microscopes typically have a system magnification of 6x to 45x Biological microscopes typically have a system magnification of 40x to 1.000x

## NeoLED<sup>™</sup>

The innovative NeoLED<sup>™</sup> 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 systems of the microscope to produce images at higher resolutions, very close to the theoretical diffraction limit of the optics

# Technical Facts



## Normal LED



NeoLED



The innovative NeoLED illumination is integrated in all binocular and trinocular MicroBlue, EcoBlue, BioBlue and BioBlue.Lab models





- Economical binocular models
- Dual and triple magnification objectives
- Cordless operation
- Digital models available
- LED illuminators
- Ergonomic carrying grip
- 5 years warranty

The EduBlue stereo microscopes are specifically designed for educational purposes and come with both dual and triple magnifications

Rack & pinion stand model ED.1402-S

EduBlue digital





EduBlue

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Triple magnification



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## FEATURES

Body	Aluminium die-casting metal frame
Optical system	Greenough stereo
Focusing	Coarse focus, stroke: 21 mm
	(rack & pinion stand)
	Coarse focus, stroke: 21 mm (pillar sta
Revolving nosepiece	Revolving triple or dual magnification of
Stage	Plain stage with 2 object clamps and rou
	Stage plates black & white + transpare
	Max. object height: 36 mm (rack & pinic
	Max. object height: 107 mm (pillar sta
Observation tube	Binocular with 45° inclined tubes
	One tube $\pm$ 5 diopter adjustment
Objectives	Paired 1x/3x, field of view 20/6.7 mm, W.
	Paired 2x/4x, field of view 10/5.0 mm, W.
	Paired 1x/2x/3x, field of view 20/10/6
	W.D. 60 mm
	Paired 1x/2x/4x, field of view 20/10/5
	W.D. 60 mm
Eyepieces	WF 10x/20 mm secured (anti-fungus)
Operating voltage	AC 100-240 V, 50/60 Hz
Batteries	Built-in, rechargeable
Height	260 mm
Weight	Approximately 2.8 kg

## MODELS

	Digital	1x/3x objective	2x/4x objective	1x/2x/3x objective	1x/2x/4x objective	Rack & pinion stand	Pillar stand
ED.1302-P		•					•
ED.1302-S		•				•	
ED.1305-S	•	•				•	
ED.1402-P			•				•
ED.1402-S			•			•	
ED.1405-S	•		•			•	
ED.1502-S				•		•	
ED.1505-S	•			•		•	
ED.1802-S					•	•	
ED.1805-S	•				•	•	





# BioBlue.Lab

MADE IN HOLLAND

- Binocular and trinocular models
- Reversed quadruple nosepiece
- Plan and plan phase objectives
- Infinity optical system
- Integrated mechanical stage
- NeoLED<sup>™</sup> illumination
- Ergonomic carrying grip
- 10 years warranty

The BlueLine flagship BioBlue.Lab is an instrument that precisely matches highest expectations of microscopy users. All models are equipped with NeoLED<sup>™</sup> illumination system and are available in binocular and trinocular versions.

These ergonomic easyto-use microscopes have specifically been designed for laboratory and university applications. The 140 x 150 mm mechanical stage has an integrated rackless X-Y stage with 75 x 30 mm travel



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 WF10x/20 mm eyepieces, plan and IOS plan 4x/10x/S40x/S100x infinity corrected objectives and create a superb image quality

Binocular model BB.1152-PLi

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BioBlue.Lab microscopes can be supplied with IOS plan phase contrastobjectives 10x / 20x / S40x / S100x, which are infinity corrected.

This enhancement is suitable for a wide variety of routine applications in laboratories and field microscopy



BioBlue

BioBlue.Lab



DIMENSIONS



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Body	Aluminium die-casting metal frame
Optical system	Infinity optical system
	Finity optical system
Focusing	200 graduations, 1.5 $\mu$ m per graduation,
	0.3 mm per rotation total travel approximately
	28 mm. With friction adjustment
Revolving nosepiece	Reversed quadruple nosepiece
Stage	Mechanical rackless X-Y stage, 140 x 150 mm,
	travelling range 75 x 30 mm
Observation tube	Binocular and trinocular 30° inclined tubes
	One tube with $\pm$ 5 diopter adjustment
Objectives	Plan (anti-fungus)
Eyepieces	WF 10x/20 mm (anti-fungus)
Operating voltage	AC 100-240 V, 50/60 Hz
Height	470 mm
Weight	Approximately 6 kg

## MODELS

	Binocular	Trinocular	4x/10x/S40x/ S100x plan objectives	4x/10x/S40x/ S100x plan IOS objectives	10x/20x/S40x/S100x plan phase IOS objectives	Rackless mechanical stage	NeoLED
BB.1152-PL	•		•			•	•
BB.1153-PL		•	•			•	•
BB.1152-PLi	•			•		•	•
BB.1153-PLi		•		•		•	•
BB.1152-PLPHi	•				•	•	•
BB.1153-PLPHi		•			•	•	•

# **Objectives**

Most common microscope objectives come in three different types: achromatic, semi plan and plan

## Achromatic objectives

Usually contain a pair of lenses and correct for colour and have a flat field correction for about 65% of the image. If there are aberrations they occur in the outer 35% of the image

## Semi plan objectives

Contain three or more (achromatic) lens elements and have an 80% flat field. Semi plan objectives have an improved resolution

## **Plan objectives**

Correct even better for colour and spherical aberration than semi plan objectives. Plan objectives have a 95% flat field and produce the best image quality

# Rackless stage

The BioBlue.Lab rackless stage has no protruding parts, making it easier to reach the focusing knobs from any angle

The rackless stage enables convenient and smooth movement and guarantees durability



Normal stage



# Technical Facts



# Anti-fungus treated

Fungus spores are parasitic, travel in the air and can settle inside lenses. High temperatures, humidity and environments that are dark and unventilated encourage fungus growth

The BlueLine optical components are anti-fungus treated. Nevertheless it is best to minimize the possibility of fungus by storing the microscopes in well-ventilated rooms with moderate temperatures and low humidity

Fungus



# StereoBlue

MADE IN HOLLAND

- Stereo Zoom versions
- Dual 1x/3x or 2x/4x magnification versions
- Ergonomically designed
- Available with
- rack & pinion stands
- pillar stands
- universal stands
- 3 W LED illuminators
- Ergonomic carrying grip
- 5 years warranty

Stereo (zoom) microscopes generate three-dimensional images and allow extended working distances. StereoBlue microscopes are perfect for observing large biological samples or analysis of rough materials surfaces

The StereoBlue series are available in fixed dual magnification and zoom 0.7x to 4.5x magnification versions. They are most suitable for many routine applications for the industry and laboratories

Rack & pinion stand model SB.1903



Pillar stand model SB.1402-P



Universal stand model SB.1903-U



## FEATURES

Aluminium die-casting metal frame
Greenough stereo
Zoom stereo
Coarse focus, stroke: 21 mm (rack & pinie
Coarse focus, stroke: 21 mm (pillar sta
Revolving dual magnification objectiv
or zoom objective
Plain stage with 2 object clamps and
round 60 mm stage plates
black & white + opaque
Max. object height: 193 mm (rack & pinio
Max. object height: 175 mm (pillar sta
Binocular and trinocular heads with
45° inclined tubes
Two tubes with $\pm$ 5 diopter adjustment
Paired 1x/3x, field of view 20/6.6 mm, W.D
Paired 2x/4x, field of view 10/5.0 mm, W.D
Paired Zoom 0.7 to 4.5x, field of view
4.4 mm, W.D. 100 mm
WF 10x/20 mm secured (anti-fungus)
Internal power supply AC 100-240 V, 5
364 mm
Approximately 4 kg (with pillar stand)
Approximately 4.7 kg (with rack & pinio

## MODELS

	Binocular	Trinocular	1x/3x objective	2x/4x objective	0.7-4.5x zoom	Rack & pinion stand	Pillar stand	Universal stand
SB.1302	•		•			•		
SB.1302-P	•		•				•	
SB.1402	•			•		•		
SB.1402-P	•			•			•	
SB.1902	•				•	•		
SB.1902-P	•				•		•	
SB.1902-U	•				•			•
SB.1903		•			•	•		
SB.1903-P		•			•		•	
SB.1903-U		•			•			•



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D. 100 mm 28.5 to

50/60 Hz

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DIMENSIONS

<b>DO</b> BINO		360°	ZOOM	LED
	TRANSMITTED	100-240V	MARRANTY	



## **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 and stereo microscopes

The corporate office is based in Arnhem, The Netherlands. A facility with a 2.000 m<sup>2</sup> conditioned logistics warehouse, an optomechanical workshop, an R&D department and a high-level quality control department

Around the world, Euromex operates in more than 80 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**

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Management System ISO 9001:2008 www.tuv.com ID 0000037140

The Euromex Quality System is certified according to ISO 9001:2008 and supports our pursuit of continuous improvement and our on-going commitment to provide our world-wide customers assurance of product quality