

# bScope



## HIGHLIGHTS

- Provided with APL (Antimicrobial Protection Layer)
- Microscopes for research and laboratories
- Monocular, binocular and trinocular models
- Digital models available
- HWF 10x/20 mm eyepieces
- Reversed ball-bearing quadruple or quintuple nosepiece with slot for polarization filter
- E-plan, E-plan IOS and Plan IOS objectives
- Plan Phase IOS objectives
- Rackless integrated X-Y mechanical stage
- 3 W NeoLED™ adjustable illumination system
- Integrated carrying grip
- Cable Storage System
- 10 Years warranty



● BS.1152-PLi

## TECHNICAL SPECIFICATIONS

### EYEPIECE(S)

High wide field HWF 10x/20 mm secured eyepiece(s) with 20 mm field of view. The eyepiece of monocular models is supplied with pointer

### HEAD

- The bScope is available with a monocular head (45° inclined Ø 23.2 mm tube) or with a Siedentopf type head, 360° rotatable, with 30° inclined Ø 23.2 mm tubes
- Binocular and trinocular models are equipped with a diopter ± 5 adjustment on left eyepiece
- The interpupillary distance is adjustable between 48 to 76 mm
- The models equipped with plan infinity corrected PLi objectives have a unique swiveling system of the eyepiece tubes for ergonomic positioning of both tubes in a high (431 mm) and in a low position (377 mm)
- The trinocular head comes with a Ø 23.2 mm tube, ensuring a maximum of flexibility and has a fixed light path beam splitter (20:80) 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 page 4)

### NOSEPIECE

Revolving and reversed ball-bearing quadruple or quintuple nosepiece

### OBJECTIVES - 45 MM PARFOCAL

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

MONOCULAR MODEL BS.1151-XXX	385 (h) x 195 (w) x 235 (d)   6.3 kg
BINOCULAR MODEL BS.1152-XXX	409 (h) x 195 (w) x 235 (d)   6.5 kg
TRINOCULAR MODEL BS.1153-XXX	459 (h) x 195 (w) x 235 (d)   6.6 kg

- Brightfield models: E-Plan, E-plan IOS infinity corrected, Plan IOS infinity corrected 4x/0.10, 10x/0.25, 20x/0.40, S40x/0.65, S60x/0.85 and S100x/1.25 oil immersion objectives
- Phase contrast models: Plan Phase IOS infinity corrected 10x/0.25, 20x/0.40, S40x/0.65 and S100x/1.25 oil immersion objectives
- Darkfield model: E-plan 4x/0.10, 10x/0.25, 20x/0.40, S40x/0.65, S60x/0.85 objectives. The s100x/1.25 oil immersion objective has a built-in iris diaphragm

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 1.11 µm, 200 µm per rotation, total travel range 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 in height adjustable Abbe N.A. 1.25 condenser for brightfield comes with an iris diaphragm and swing-out filter holder

## ZERNIKE CONDENSER FOR PHASE CONTRAST

The in 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 bright field contrast. Phase contrast objectives in PL-PHi phase contrast version. Supplied with alignment telescope and green filter

## CONDENSER WITH SLIDER(S) FOR PHASE CONTRAST

The in 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 also includes a BF position for bright field contrast. Phase contrast objectives in PL-PHi version. Supplied with alignment telescope and green filter

## CONDENSER FOR DARKFIELD

A state-of-the-art condenser equipped with reflective cardioid mirrors, with an integrated high powered 5 W LED light source. Together with a S100x objective with built-in iris diaphragm this forms a 1000x magnification darkfield solution. The power supply of the 5 W LED light source is built in the microscope. The darkfield condenser can easily be exchanged for a brightfield condenser which is also included

## DARKFIELD EQUIPMENT

The BS.1153-EPL/DF is equipped with a darkfield oil immersion cardioid mirror condenser with a integrated 5W LED illumination and a plan PL S100x oil immersion objective with built-in iris

## POLARISATION

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

## ILLUMINATION

The microscopes of the bScope are equipped with a 3 W NeoLED adjustable illumination system for increased light output and a 100-240 Vac integrated power supply. On request, rechargeable batteries are also available

## NEOLED™ ILLUMINATION

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

## KÖHLER ILLUMINATION

A Köhler illumination 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 AA 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*

- *Darkfield cardioid mirror condenser*



### APL (ANTIMICROBIAL PROTECTION LAYER)

Using the same technology already used extensively throughout the healthcare environment in wall coatings, patient lighting, air pressure stabilization and suction liners, APL prevents the growth of unwanted microbes that can cause degradation, discoloration, staining or odors of the Euromex microscopes



### BSCOPE® FOR BRIGHTFIELD AND DARKFELD \*

MODELS	Mono	Bino	Trino	HWF 10x/20 mm eyepieces	Quadruple nosepiece E-plan 4/10/540/S100x	Quadruple nosepiece plan IOS 4/10/540/S100x	Quintuple nosepiece E-plan IOS 4/10/540/S100x	Quintuple nosepiece plan IOS 4/10/540/S100x	Köhler NeoLED™	Neo-LED™	2-position swiveling ergo head
BS.1151-EPL	•			•	•						•
BS.1152-EPL		•		•	•						•
BS.1153-EPL			•	•	•						•
BS.1153-EPL/DF*			•	•	•						•
BS.1152-EPLi		•		•			•		•		•
BS.1153-EPLi			•	•			•		•		•
<b>BS.1152-PLi</b>		•		•				•	•		•
BS.1153-PLi			•	•				•	•		•
BS.1152-PLi/4N		•		•			•		•		•
BS.1153-PLi/4N			•	•			•		•		•

\* BS.1153-EPL/DF model is equipped with a dark field oil immersion cardioïd mirror condenser and a S100x oil immersion objective with built-in iris diaphragm

AA Batteries are optional

Some models are also available as medical device, EU MDR 2017-745, contact your Euromex dealer

### BSCOPE FOR PHASE CONTRAST

MODELS	Bino	Trino	HWF 10x/20 mm eyepieces	Quadruple nosepiece E-plan Phase 10/20/540 S100x	Quintuple nosepiece E-plan Phase IOS 10/20/540 S100x	Quintuple nosepiece Plan Phase IOS 10/20/540 S100x	Köhler NeoLED™	NeoLED™	2-position swiveling ergo head
BS.1152-PLPHi	•		•			•	•		•
BS.1153-PLPHi		•	•			•	•		•

Rechargeable batteries is optional

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

These models are also available as medical device, EU MDR 2017-745, contact your Euromex dealer



● BS.1151-EPL



● BS.1153-PLPHi



● BS.1152-PLi

# bScope digital



## HIGHLIGHTS

- Binocular model
- Integrated 5.0 MP CMOS color USB.2 camera
- 2592 x 1944 pixels
- 7 frames per second (2592 x 1944 pixels)
- 27 frames per second (1280 x 960 pixels)
- ImageFocus Alpha software
- 10 Years warranty (2 years on camera)

● BS.1157-PLi



## TECHNICAL 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 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 10 and higher, both 32 and 64 bits configurations. A Mac OS version is also available. Free updates can be downloaded from our website

### BS.1157-EPLi

409 (h) x 195 (w) x 235 (d) | 7.1 kg

Further specifications are identical to the analog bScope® models

MODELS	Binocular head	HWF 10x/20 mm eyepieces	Quintuple nosepiece E-plan IOS 4/10/S40/S100x	Quintuple nosepiece plan IOS 4/10/S40/S100x	Köhler NeoLED™
BS.1157-EPLi	•	•	•		•
BS.1157-PLi	•	•		•	•

All models can optionally be supplied with three AA rechargeable batteries

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

- BS.6010** HWF 10x/20 mm eyepiece, Ø 23.2 mm tube
- BS.6010-P** HWF 10x/20 mm eyepiece with pointer, Ø 23.2 mm tube
- BS.6010-C** HWF 10x/20 mm eyepiece with crosshairs, Ø 23.2 mm tube
- BS.6010-CM** HWF 10x/20 mm eyepiece with 10/100 micrometer and crosshairs
- BS.6012** WF 12.5x/14 mm eyepiece
- BS.6015** WF 15x/11 mm eyepiece
- BS.6020** WF 20x/11 mm eyepiece
- BS.6099** Pair of eyecups

### OBJECTIVES - 45 MM PARFOCAL

- BS.7104** E-plan EPL 4x/0.10 objective. WD 37.0 mm
- BS.7110** E-plan EPL 10x/0.25 objective. WD 6.61 mm
- BS.7120** E-plan EPL 20x/0.40 objective. WD 1.85 mm
- BS.7140** E-plan EPL S40x/0.65 objective. WD 0.64 mm
- BS.7160** E-plan EPL S60x/0.85 objective. WD 0.20 mm
- BS.7100** E-plan EPL S100x/1.25 oil immersion objective. WD 0.19 mm
- 86.521** Plan PL S100x/1.25 oil immersion objective with built-in iris diaphragm. Working distance 0.33 mm

- BS.8204** E-plan EPLi 4x/0.10 infinity corrected IOS objective. WD 18.9 mm
- BS.8210** E-plan EPLi 10x/0.25 infinity corrected IOS objective. WD 5.95 mm
- BS.8220** E-plan EPLi 20x/0.40 infinity corrected IOS objective. WD 2.61 mm
- BS.8240** E-plan EPLi S40x/0.65 infinity corrected IOS objective. WD 0.78 mm
- BS.8200** E-plan EPLi S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.36 mm

- BS.8404** Plan PLi 4x/0.10 infinity corrected IOS objective. WD 21.0 mm
- BS.8410** Plan PLi 10x/0.25 infinity corrected IOS objective. WD 5.0 mm
- BS.8420** Plan PLi 20x/0.40 infinity corrected IOS objective. WD 8.8 mm
- BS.8440** Plan PLi S40x/0.65 infinity corrected IOS objective. WD 0.66 mm
- BS.8460** Plan PLi S60x/0.80 infinity corrected IOS objective. WD 0.46 mm
- BS.8400** Plan PLi S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.36 mm

- BS.8710** Plan Phase PLPHi 10x/0.25 infinity corrected IOS objective. WD 5.00 mm
- BS.8720** Plan Phase PLPHi 20x/0.40 infinity corrected IOS objective. WD 8.80 mm
- BS.8740** Plan Phase PLPHi S40x/0.65 infinity corrected IOS objective. WD 0.66 mm
- BS.8700** Plan Phase PLPHi S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.36 mm

### CONDENSERS AND ACCESSORIES

- BS.9102** Abbe condenser 1,25 NA with slot for darkfield and phase contrast sliders. Without darkfield slider and without phase contrast slider
- BS.9170** Darkfield stop for BS.9102 condenser
- BS.9105** Swing-out Abbe condenser 0.9/1.25 NA

### PHASE CONTRAST ACCESSORIES

- BS.9123** Zernike phase contrast kit with plan PLPH 10/20/S40 and S100 oil phase contrast objectives, Zernike rotating condenser, telescope and green filter
- BS.9126** Zernike phase contrast kit with plan PLPHi 10/20/S40 and S100 oil phase contrast IOS infinity corrected objectives, Zernike rotating condenser, telescope and green filter
- BS.9164** Phase contrast kit with Abbe condenser with slot for slider. Plan PLPHi phase S40x contrast objectives, slider with 40x annuli only, telescope and green filter
- BS.9194** Slider with phase contrast annuli 40x. Needs BS.9102 condenser with slot
- BS.9148** Alignment telescope for bScope IOS version with 30 mm tubes
- BS.9149** Alignment telescope for bScope non IOS version with 23.2 mm tubes
- BS.9162** Phase contrast kit with Abbe condenser with slot for slider. Plan PLPHi 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.9647** Polarization polarizer 16 mm diameter for slider under bScope head
- BS.9651** Polarization attachment for lamphouse of bScope with 360° scale
- BS.9660** Polarization kit: analyzer under head and polarizer on lamphouse
- AE.5152-N** Small rotatable stage to be used with BS.9660



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

**MISCELLANEOUS**

- BS.9577-L** Add-on for left handed mechanical stage (only with new purchased microscope)
- BS.9870** Mirror attachment for bScope
- BS.9880** Köhler attachment for bScope
- BS.9900** Aluminum transport case for bScope
- AE.9919** Nylon microscope bag XL, 58 (h) x 32 (w) x 24 (d)
- AE.9916** Dust cover XL
- BS.9993** NeoLED™ replacement unit
- AE.1370** Set rechargeable batteries
- AE.5226** Glass fuses 3A 250V, 10pcs

**DISPOSABLES**

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- 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.5160** Microscope slides 76 x 26 mm with cavity, ground edges. 10 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 = 1.515
- PB.5274** Iso propyl 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



● AE.9916



● AE.9919



● BS.1153-PLi  
with camera



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