

# bScope

## HIGHLIGHTS

- Microscopes for research and laboratories
- 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
- Integrated carrying grip
- Cable Storage System
- 10 Years warranty

## TECHNICAL SPECIFICATIONS

### EYEPIECE(S)

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

### 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  $\pm 5$  adjustment on left eyepiece
- The interpupillary distance is adjustable between 48 to 76 mm
- The models equipped with plan infinity corrected PLi objectives have a unique swiveling system of the eyepiece tubes for ergonomic positioning of the eyepieces in a high and in a low position
- The trinocular head comes with a Ø 23.2 mm photo port, ensuring maximum flexibility. The prisms inside the heads are designed to minimize the light absorption for perfect digital imaging

### 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 enables the bScope to be used for the most demanding applications. World class spherical aberration correction and modern CNC and assembly technology ensure the perfect centering of the objectives

- 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



● BS.1152-PLi

- 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 1.11  $\mu\text{m}$ , 200  $\mu\text{m}$  per rotation, total travel 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 either EPL-PH, EPL-PHi or PL-PHi phase contrast versions. 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 either EPL-PH, EPL-PHi or PL-PHi versions. Supplied with alignment telescope and green filter

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

### 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



*Carrying grip*

### 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.1153-PLi**  
with camera

**BSCOPE FOR BRIGHTFIELD**

MODELS	Mono	Bino	Trino	HWF 10x/20 mm eyepieces	Quadruple nosepiece Plan 4/10/540/5100x	Quadruple nosepiece E-plan 4/10/540/5100x	Quintuple nosepiece E-plan IOS 4/10/540/5100x	Quintuple nosepiece Plan IOS 4/10/540/5100x	Köhler NeoLED™	NeoLED™	2-position swivelling ergo head	Rechargeable batteries
BS.1151-EPL	•			•		•						o
BS.1152-EPL		•		•		•				•		o
BS.1153-EPL			•	•		•				•		o
BS.1152-EPLi		•		•			•		•		•	o
BS.1153-EPLi			•	•			•		•		•	o
BS.1151-PL	•			•	•							o
BS.1152-PLi		•		•				•	•		•	o
BS.1153-PLi			•	•				•	•		•	o

**BSCOPE FOR PHASE CONTRAST**

MODELS	Bino	Trino	HWF 10x/20 mm eyepieces	Quadruple nosepiece E-plan Phase 10/20/540 5100x	Quintuple nosepiece E-plan Phase IOS 10/20/540 5100x	Quintuple nosepiece Plan Phase IOS 10/20/540 5100x	Köhler NeoLED™	NeoLED™	2-position swivelling ergo head	Rechargeable batteries
BS.1152-EPLPH	•		•	•				•		o
BS.1153-EPLPH		•	•	•				•		o
BS.1152-EPLPHi	•		•		•		•		•	o
BS.1153-EPLPHi		•	•		•		•		•	o
BS.1152-PLPHi	•		•			•	•		•	o
BS.1153-PLPHi		•	•			•	•		•	o

o = optional

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



● BS.1151-EPL



● BS.1153-PLPHi



● BS.1152-PLi

## ACCESSORIES AND SPARE PARTS

### EYEPIECES

<b>BS.6010</b>	HWF 10x/20 mm eyepiece
<b>BS.6010-P</b>	HWF 10x/20 mm eyepiece with pointer
<b>BS.6010-C</b>	HWF 10x/20 mm eyepiece with crosshairs
<b>BS.6010-CM</b>	HWF 10x/20 mm eyepiece with 10/100 micrometer and crosshairs
<b>BS.6012</b>	WF 12.5x/14 mm eyepiece
<b>BS.6015</b>	WF 15x/11 mm eyepiece
<b>BS.6020</b>	WF 20x/11 mm eyepiece
<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.7110</b>	E-plan EPL 10x/0.25 objective. WD 6.61 mm
<b>BS.7120</b>	E-plan EPL 20x/0.40 objective. WD 1.85 mm
<b>BS.7140</b>	E-plan EPL S40x/0.65 objective. WD 0.64 mm
<b>BS.7160</b>	E-plan EPL S60x/0.85 objective. WD 0.20 mm
<b>BS.7100</b>	E-plan EPL S100x/1.25 oil immersion objective. WD 0.19 mm

<b>BS.7204</b>	Plan PL 4x/0.10 objective. Working distance 17.9 mm
<b>BS.7210</b>	Plan PL 10x/0.25 objective. WD 8.8 mm
<b>BS.7220</b>	Plan PL 20x/0.40 objective. WD 8.6 mm
<b>BS.7240</b>	Plan PL S40x/0.65 objective. WD 0.56 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 6.61 mm
<b>BS.7520</b>	E-Plan Phase EPLPH 20x/0.40 objective. WD 1.85 mm
<b>BS.7540</b>	E-Plan Phase EPLPH S40x/0.65 objective. WD 0.64 mm
<b>BS.7500</b>	E-Plan Phase EPLPH S100x/1.25 oil immersion objective. WD 0.19 mm

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

<b>BS.8404</b>	Plan PLi 4x/0.10 infinity corrected IOS objective. WD 21.0 mm
<b>BS.8410</b>	Plan PLi 10x/0.25 infinity corrected IOS objective. WD 5.0 mm
<b>BS.8420</b>	Plan PLi 20x/0.40 infinity corrected IOS objective. WD 8.8 mm
<b>BS.8440</b>	Plan PLi S40x/0.65 infinity corrected IOS objective. WD 0.66 mm
<b>BS.8460</b>	Plan PLi S60x/0.85 infinity corrected IOS objective. WD 0.46 mm
<b>BS.8400</b>	Plan PLi S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.36 mm

<b>BS.8510</b>	E-Plan Phase EPLPHi 10x/0.25 infinity corrected IOS objective. WD 5.95 mm
<b>BS.8520</b>	E-Plan Phase EPLPHi 20x/0.40 infinity corrected IOS objective. WD 2.61 mm
<b>BS.8540</b>	E-Plan Phase EPLPHi S40x/0.65 infinity corrected IOS objective. WD 0.78 mm
<b>BS.8500</b>	E-Plan Phase EPLPHi S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.36 mm
<b>BS.8710</b>	Plan Phase PLPHi 10x/0.25 infinity corrected IOS objective. WD 5.00 mm
<b>BS.8720</b>	Plan Phase PLPHi 20x/0.40 infinity corrected IOS objective. WD 8.80 mm
<b>BS.8740</b>	Plan Phase PLPHi S40x/0.65 infinity corrected IOS objective. WD 0.66 mm
<b>BS.8700</b>	Plan Phase PLPHi S100x/1.25 oil immersion infinity corrected IOS objective. WD 0.36 mm

### CONDENSERS AND ACCESSORIES

<b>BS.9102</b>	Abbe condenser 1,25 NA with slot for darkfield and phase contrast sliders
<b>BS.9105</b>	Swing-out Abbe condenser 0,9/1,25 NA

### PHASE CONTRAST ACCESSORIES

<b>BS.9118</b>	Zernike phase contrast kit with E-plan EPLPH 10/20/S40 and S100 oil phase contrast objectives, Zernike rotating condenser, telescope and green filter
<b>BS.9120</b>	Zernike phase contrast kit with E-plan EPLPHi 10/20/S40 and S100 oil phase contrast IOS infinity corrected objectives, Zernike rotating condenser, telescope and green filter
<b>BS.9123</b>	Zernike phase contrast kit with plan PLPH 10/20/S40 and S100 oil phase contrast objectives, Zernike rotating condenser, telescope and green filter
<b>BS.9126</b>	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
<b>BS.9148</b>	Alignment telescope for bScope IOS version with 30 mm tubes
<b>BS.9149</b>	Alignment telescope for bScope non IOS version with 23.2 mm tubes
<b>BS.9156</b>	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
<b>BS.9157</b>	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
<b>BS.9158</b>	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 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

## 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.9102** Abbe condenser 1.25 NA with slot for darkfield and phase contrast sliders. Without darkfield slider and without phase contrast sliders
- BS.9170** Slider with darkfield stop for Abbe condenser with slot for bScope. Needs condenser with slot (BS.9102)
- BS.9880** Köhler attachment for bScope
- BS.9900** Aluminum transport case for bScope
- BS.9993** NeoLED™ replacement unit
- AE.1370** Set rechargeable batteries

## 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.5165** Cover glasses 18 x 18 mm, 0.13-0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, 0.13-0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, 25 ml. Refraction index  $n = 1.482$
- PB.5274** Iso propyl alcohol 99%, 200 ml
- PB.5275** Cleaning kit: lens fluid, lint free lens tissue/paper, brush, air blower, cotton swabs
- 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

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