

## B-500 Series

High quality upright laboratory microscopes



# B-500 Series

The B-500 microscopes have been designed for the best performance in routine laboratory use.

According to the models, two different optical systems are available (InfiniFix and IOS).

With InfiniFix optical system, the two worlds of infinity-corrected and 160 mm optical system find the way to meet each other. With this exclusive optical system all InfiniFix models use a true infinity-corrected optical path, implemented with standard 160 mm objectives. IOS simply means "Infinity Optical System". All IOS models of B-500 series are equipped with true Infinity Corrected Objectives.

<b>B-500Bsp</b>	Binocular microscope, Semi-plan objectives 4x, 10x, 40x, 100x, halogen illumination.
<b>B-500Tsp</b>	Trinocular microscope, Semi-plan objectives 4x, 10x, 40x, 100x, halogen illumination.
<b>B-500Bpl</b>	Binocular microscope, Plan objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500Tpl</b>	Trinocular microscope, Plan objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500Bi</b>	Binocular microscope, Plan IOS objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500Ti</b>	Trinocular microscope, Plan IOS objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500ERGO</b>	Binocular microscope, ERGO head, Plan objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500iERGO</b>	Binocular microscope, ERGO head, IOS Plan objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500Bph</b>	Binocular microscope, Phase contrast Plan objectives 10x, 20x, 40x, 100x, X-LED illumination.
<b>B-500Tph</b>	Trinocular microscope, Phase contrast Plan objectives 10x, 20x, 40x, 100x, X-LED illumination.
<b>B-500BiPh</b>	Binocular microscope, IOS Phase contrast Plan objectives 10x, 20x, 40x, 100x, X-LED illumination.
<b>B-500TiPh</b>	Trinocular microscope, IOS Phase contrast Plan objectives 10x, 20x, 40x, 100x, X-LED illumination.
<b>B-500Ti-2</b>	Discussion microscope, 2-head, Plan IOS objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500Ti-3</b>	Discussion microscope, 3-head, Plan IOS objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500Ti-5</b>	Discussion microscope, 5-head, Plan IOS objectives 4x, 10x, 40x, 100x, X-LED illumination.
<b>B-500TDK</b>	Trinocular microscope for immersion darkfield technique X-LED system.

## Special additional versions

<b>B-500TiFL</b>	Trinocular EPI fluorescence microscope, HBO illumination system. (Information in <b>FLUO SERIES</b> )
<b>B-500POL</b>	Polarizing laboratory microscope, X-LED illumination. (Information in <b>POL SERIES</b> )
<b>B-500POL-I</b>	Polarizing laboratory microscope, X-LED incident & transmitted illumination. (Information in <b>POL SERIES</b> )
<b>B-500MET</b>	Upright Metallurgical Microscope, IOS MET objectives, X-LED incident & transmitted illumination. (Information in <b>INDUSTRY SERIES</b> )
<b>B-500ASB</b>	Trinocular microscope, Plan objectives 4x, 10x, 40x, 40xPh, 100x, X-LED illumination, Walton & Beckett 12,5x Eyepiece.

## B-500TDK: Brief introduction to our darkfield system for blood analysis



Two great solutions together:  
- our 1.36 1.25 N.A. special extra efficient darkfield condenser  
- OPTIKA X-LED™ illuminator (integrated into the condenser).  
RESULTS: our immersion darkfield system provides the same result achieved by 150W external illuminators in combination with traditional cardioid darkfield condenser.



## B-500 Series - Specifications

OPTIKA is proud to introduce its own revolutionary LED powered illumination system.

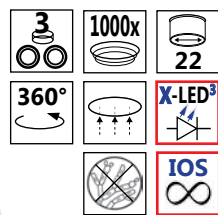
Developed by our R&D dept., it consists of a new combination of LED and optical technology.

A new high-efficiency single chip LED works in combination with a special optical lens, which allows to double the intensity of the light generated by the LED itself. The result is a quantity of light equivalent to the light generated by a normal 50W halogen bulb, but with a colour temperature of 6300K. It means white light instead of the yellow one produced by halogen bulbs. The electrical consumption (3.6W only) shows the high efficiency of the system: same light intensity with less than 10% of the consumption of a normal halogen bulb.

Last but not least, the lifetime of our LED: 50.000 hours, instead of 1.500 hours.



### B-500Ti



#### Optical system & objectives

S-Plan and Plan 160mm Finity Corrected Objectives on InfiniFix models.  
Plan Infinity corrected objectives on all IOS models.

#### Microscope stand

The modern stand design, with accessible and ergonomic controls, complements and enhances the instrument's usability.

#### Head

The wide 22 mm field of view and the high-point eyepieces allow for hours of use without eye fatigue.

#### Illuminators

The B-500 microscopes are equipped with two kinds of illuminators (both with field diaphragm): high-efficiency dichroic 20W halogen illuminator (models with SEMI-PLAN objectives), or our special X-LED illuminator (models with PLAN objectives). Both systems permit light-intensive applications, such as phase contrast or darkfield, without the need of complex active cooling and keeping the electrical consumption at lowest levels.

#### Condenser

Two kinds of swing-out condensers are available (depending on the models):

- 0.10/1.20 N.A. for better performances with high magnifications;
- 0.22/0.90 N.A. for better performances with low magnifications (pathology).

#### Specimen stage

A generously sized double layer stage, suitable for two specimen slides, optimally completes the instrument.

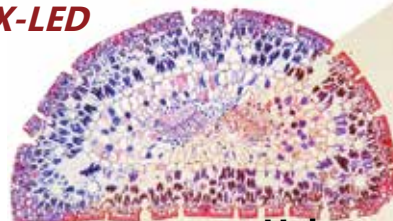
175x145mm, X-Y range: 76x51mm.

#### Standard LED

#### X-LED<sup>3</sup> illumination system



#### X-LED

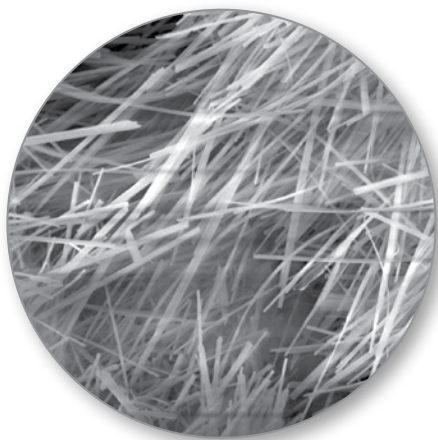
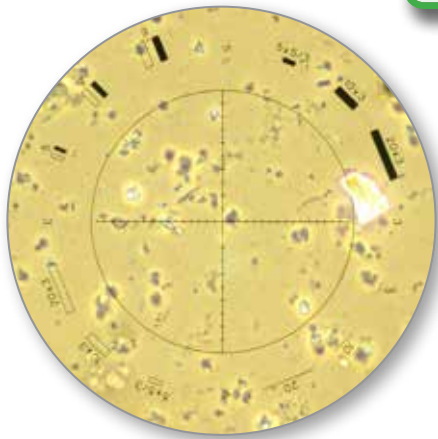


#### Halogen

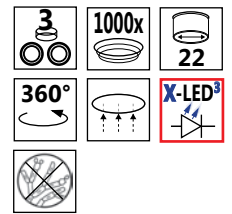
# B-500 Series - Models

Special version for asbestos analysis

**Eyepieces**  
Walton-Beckett



**B-500ASB**

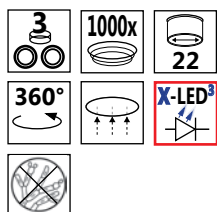




# B-500 Series - Models

A complete range of instruments

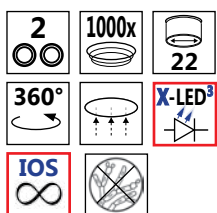
## B-500Tpl



**infinifix<sup>TM</sup>**  
optical system

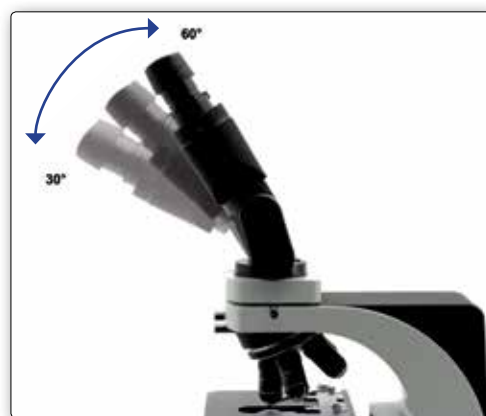
**X-LED<sup>3</sup>**

## B-500iERGO



**X-LED<sup>3</sup>**

**IOS<sup>TM</sup>**  
objectives



# B-500 Series - Models



**B-500Ti-5**




**B-500BiPh**

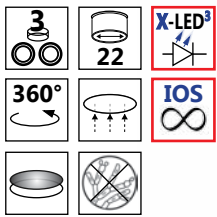

# B-500 Series - Technical specifications

Model	Optical System	Head	Eyepiece	Objectives	Nosepiece	Stage	Focusing	Condenser	Illuminator
<b>B-500Bsp</b>	<b>InfiniFix</b>	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	S-planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	High efficiency Halogen 20W dichroic bulb
<b>B-500Tsp</b>	<b>InfiniFix</b>	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	S-planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	High efficiency Halogen 20W dichroic bulb
<b>B-500Bpl</b>	<b>InfiniFix</b>	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500Tpl</b>	<b>InfiniFix</b>	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500Bi</b>	<b>IOS</b>	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Plana- chromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500Ti</b>	<b>IOS</b>	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Plana- chromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500ERGO</b>	<b>InfiniFix</b>	30°-60° ergonomical bino head 360°rotating	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500iERGO</b>	<b>IOS</b>	30°-60° ergonomical bino head 360°rotating	Wide Field 10X / 22 mm	Infinity Plana- chromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500BPh</b>	<b>InfiniFix</b>	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachroma- tic for phase contrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	-PH condenser 1,25 N.A. -Brightfield swing-out 1,2 N.A. -Both with centering system.	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500TPh</b>	<b>InfiniFix</b>	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachroma- tic for phase contrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	-PH condenser 1,25 N.A. -Brightfield swing-out 1,2 N.A. -Both with centering system.	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500BiPh</b>	<b>IOS</b>	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Plana- chromatic for phase contrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	-PH condenser 1,25 N.A. -Brightfield swing-out 0,90 N.A. -Both with centering system.	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500TiPh</b>	<b>IOS</b>	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Plana- chromatic for phase contrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	-PH condenser 1,25 N.A. -Brightfield swing-out 0,90 N.A. -Both with centering system.	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500TDK</b>	<b>InfiniFix</b>	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x. Special PL100x (oil, with iris diaphragm)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable. Extra N.A. 1.36 darkfield type with built-in X-LED	OPTIKA X-LED <sup>3</sup> illuminator
<b>B-500Ti-2</b>	<b>IOS</b>	Main Head: trino 360°/30°. 1 discussion head: bino 360°/30°	Main head: WF10X/22mm Discus- sion heads: WF10x/20mm	Infinity Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator. Discussion laser pointer under the head
<b>B-500Ti-3</b>	<b>IOS</b>	Main Head: trino 360°/30° 2 discussion heads: bino 360°/30°	Main head: WF10X/22mm Discus- sion heads: WF10x/20mm	Infinity Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator. Discussion laser pointer under the head
<b>B-500Ti-5</b>	<b>IOS</b>	Main Head: trino 360°/30° 4 discussion heads: bino 360°/30°	Main head: WF10X/22mm Discus- sion heads: WF10x/20mm	Infinity Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED <sup>3</sup> illuminator. Discussion laser pointer under the head
<b>B-500ASB</b>	<b>InfiniFix</b>	Trinocular 360° rotating 30° inclined	1 pair: 12,5X Walton-Beckett eyepieces  1 pair: Wide- field 10x/22 mm eyepieces	Planachromatic 4x, 10x, 40x, 40xPH, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	-PH condenser 1,25 N.A. for 40XPH -Brightfield swing-out 1,2 N.A. -Both with centering system	OPTIKA X-LED <sup>3</sup> illuminator.

# B-500 Series - Special additional versions



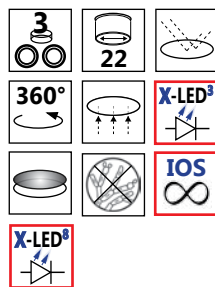
## B-500POL



More information in  
**POL SERIES  
BROCHURE**



## B-500POL-I



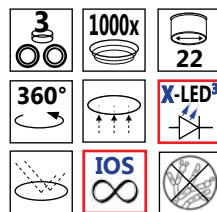
More information in  
**POL SERIES  
BROCHURE**



# B-500 Series - Special additional versions



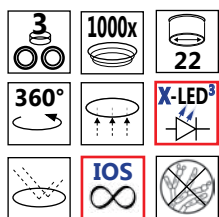
## B-500MET



More information in  
**INDUSTRY  
SERIES BROCHURE**



## B-500TiFL



More information in  
**FLUO SERIES  
BROCHURE**

# B-500 Series - Accessories

## B-500

M-680	Ergo binocular head 30°-60°.
M-625	Eyepiece EWF10x/22mm.
M-601	Eyepiece WF15x/16mm.
M-602	Eyepiece micrometer EWF10x/22mm.
M-005	26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
M-501	Objective 4x/0,10 S-PLAN.
M-502	Objective 10x/0,25 S-PLAN.
M-503	Objective 20x/0,40 S-PLAN.
M-504	Objective 40x/0,65 S-PLAN.
M-505	Objective 60x/0,80 S-PLAN.
M-506	Objective 100x/1,25 S-PLAN (Oil).
M-507	Objective 4x/0,10 PLAN.
M-508	Objective 10x/0,25 PLAN.
M-509	Objective 20x/0,40 PLAN.
M-510	Objective 40x/0,65 PLAN.
M-511	Objective 60x/0,85 PLAN.
M-512	Objective 100x/1,25 PLAN (Oil).
M-608	Objective 4x/0,10 PLAN IOS.
M-609	Objective 10x/0,25 PLAN IOS.
M-610	Objective 20x/0,40 PLAN IOS.
M-611	Objective 40x/0,65 PLAN IOS.
M-611.1	Objective 60x/0,80 PLAN IOS.
M-612	Objective 100x/1,25 PLAN IOS (Oil).
M-630	Objective PLAN Achromatic for phase contrast 10x/0,25.
M-631	Objective PLAN Achromatic for phase contrast 20x/0,40.
M-632	Objective PLAN Achromatic for phase contrast 40x/0,65.
M-633	Objective PLAN Achromatic for phase contrast 100x/1,25 (Oil).
M-760	Objective IOS PLAN Achromatic for phase contrast 10x/0,25.
M-761	Objective IOS PLAN Achromatic for phase contrast 20x/0,40.
M-762	Objective IOS PLAN Achromatic for phase contrast 40x/0,65.
M-763	Objective IOS PLAN Achromatic for phase contrast 100x/1,25 (Oil).
M-059	Objective 100x/1,25 (Oil) PLAN Achromatic with iris diaphragm for darkfield.
M-613	Polarising set (Polarizer and Analyzer filters).
M-614	Rotating table for polarising set.
M-618	Darkfield condenser for dry objectives.
M-616	Complete phase contrast set with plan obj. 10x, 20x, 40x, 100x.
M-617	Complete phase contrast set with plan IOS obj. 10x, 20x, 40x, 100x.
M-616.1	Single phase contrast set 40x, plan objective.
M-617.1	Single phase contrast set 40x, plan IOS objective.
M-619	Photo adapter for REFLEX camera with FULL FRAME sensor.
M-699	Universal adapter for M-114, M-116, M-173 and eyepiece cameras.

M-620	Focusable C-Mount adapter for 1/3" sensor.
M-620.1	Focusable C-Mount adapter for 1/2" sensor.
M-620.2	Focusable C-Mount adapter for 2/3" sensor.
M-515	Halogen bulb 12V/20W, with dichroic mirror.
M-034	Dust cover type 5.
M-975	Blue filter, 45 mm diameter.
M-977	Green filter, 45 mm diameter.
M-979	Yellow filter, 45 mm diameter.
M-989	Frosted glass filter, 45 mm diameter.
ST-036	Eyecup (pair).
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
M-114	C-Mount adapter for 1/2" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-113.1	Ring adapter, 30mm (for monocular and binocular microscopes).
M-778	C-mount adapter for 1/3", 1/2" and 2/3" sensor.
M-666.500	Heating stage, with digital temperature controller B-500.
M-666.500ph	Heating stage, with digital temperature controller B-500Ph.
15008	OPTIKA immersion oil 10ml.



### How to connect the cameras to our microscopes.

Please refer to the Adapter reference list on Digital section.

### 15104 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



## Headquarters and Manufacturing Facilities

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