

**OPTIKA<sup>®</sup>**  
M I C R O S C O P E S  
I T A L Y



**B-800 & B-1000 Series**

Research Upright Microscopes

## B-800 & B-1000 Series



# Research Upright Microscopes

OPTIKA Microscopes, thanks to the long experience achieved in microscopy development, has conceived the new B-1000: a major leap in our technological offer. As a flagship instrument, B-1000 originates from customer most demanding feedbacks and needs. Its modularity and versatility will allow to find the perfect place in any clinical or basic research laboratory. All controls are easily accessible and comfortable also for extended periods of observation.

B-1000 is built on IOS Infinity Corrected optical system, which gives both top-notch optical performances, and the possibility to extend your instrument with the broad range of accessories and modules. X-LED illumination is the best solution to have pure white light, very intense even at higher magnification, and optimum power efficiency given by solid state source.

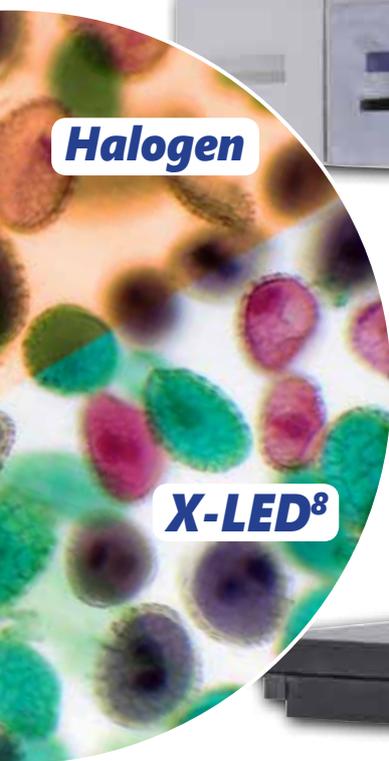
If you are looking for our best solution to your present and future professional demands, B-1000 is the answer.



Highest category of optical equipment among our product range guarantees a sharp and clear view in any situation, while top level mechanical design offers sturdiness and long lifetime.



## B-800 & B-1000 Series



**Halogen**

**X-LED<sup>8</sup>**



# Research Upright Microscopes

## **Solid Stand – Extra Stability**

A completely new design and a die-cast aluminum stand offer solidity and durability, even for the most demanding laboratory use.

This new microscope can seamlessly be upgraded with many attachments that extend its field of use.

## **X-LED White Illumination**

X-LED illumination system is based on a pure white high-efficiency LED and a special optics. It guarantees constant color temperature, no heat, and an extreme electrical consumption efficiency.

The whole system is pre-aligned and boasts a lifetime of 50.000 hours.

## **X-LED benefits**

Powerful pure white LED illumination, ideal for brightfield, darkfield and phase contrast applications. Constant color temperature through all the intensity levels. No heat generation, avoiding damage of the specimen.

Factory pre-centering assures uniform illumination over the field of view, yet providing perfect Koehler alignment. Very long lifetime and high power efficiency.

## **Light under control**

Intelligent control of the microscope illumination: the "AUTO-OFF" function automatically switches the light off after a user-selectable time period. "BOOST" gives an extra high level of illumination for light-demanding applications.

"AUTO" allows to store an illumination level, and to maintain it throughout the inspection.

## **Ergonomy**

Low position focus and stage controls allow a fast and comfortable operation. Frequently used controls as light intensity adjustment and diaphragm are also placed in the lower part of the stand and enable operation without having to take the eyes off the specimen. All optical heads are equipped with high-point eyepieces and dioptic adjustment, for the best viewing experience.



# B-800 & B-1000 Series

## Modularity – Build your own solution

Many worlds in one instrument. Modularity allows to build the desired solution (brightfield, dark-field, phase contrast, material science, fluorescence, motorized automation and so on). B-1000 has the flexibility to help your work the best way.

## Comfortable Stage

Refined belt-driven stage, with a wide working surface and a highly precise XY movement.

## High Quality IOS Optical System

Infinity corrected optical system, based on planachromatic, fluorite and semi-apochromatic objectives, designed to give sharp and clear images, both for the user and the digital camera. Quintuple and sextuple nosepieces give the flexibility to build the objectives that best suits your needs. The system is complete with wide field, high-point eyepieces, with a field number of 24mm.

## Ready for Digital Imaging

Range of adapters can accommodate for C-mount digital cameras, as well as reflex cameras. Focus adjustment gives perfectly clear digital images. Our cameras include specific software for capturing, measuring, marking and storing your images. Optika Vision Pro software allows to perform image acquisition, post-processing, measurements and storage of your images. User can save a preset for later work, or even create a multi-focus composition.



# Research Upright Microscopes

## Remote-controlled microscope

The stage can be remote-controlled through a dedicated software: X, Y, Z axes, as well as nosepiece, can be moved with a single click.

Communication protocol is available for interfacing with custom software, such as automated analysis or autofocus.

**X-Y-Z motorized stage**  
**Motorized nosepiece**



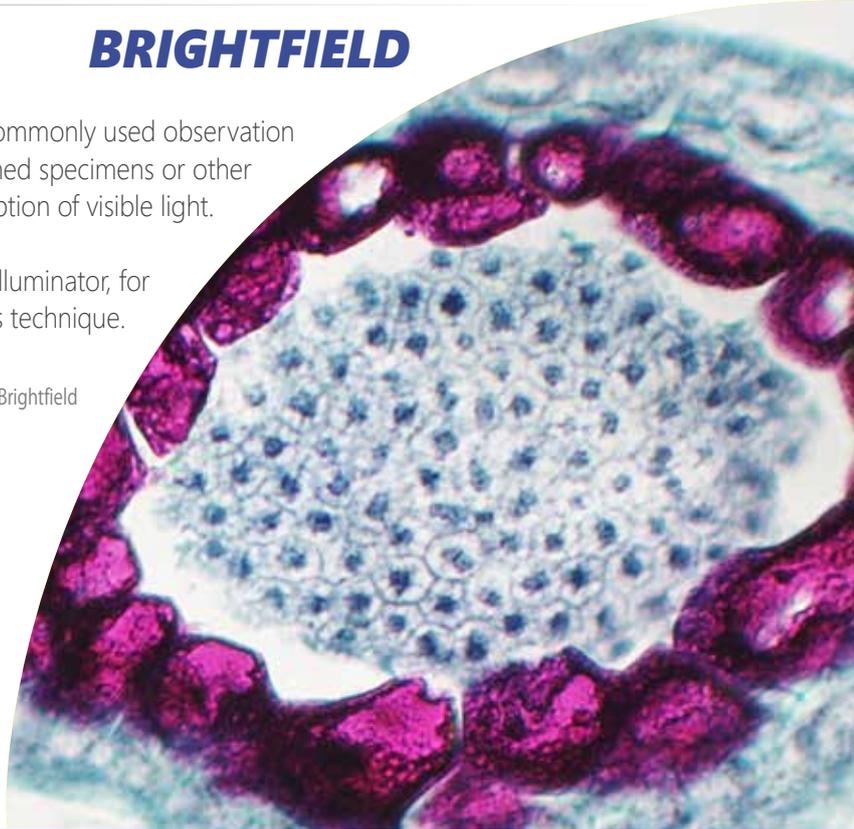
# B-800 & B-1000 Series

## **BRIGHTFIELD**

Transmitted brightfield illumination is one of the most commonly used observation method in optical microscopy, and is ideal for fixed, stained specimens or other types of samples having high natural absorption of visible light.

B-1000 Series is fitted with high-efficiency LED brightfield illuminator, for the best outcome when using this technique.

Capsella middle embryo - B-800 - Brightfield



## **FLUORESCENCE**

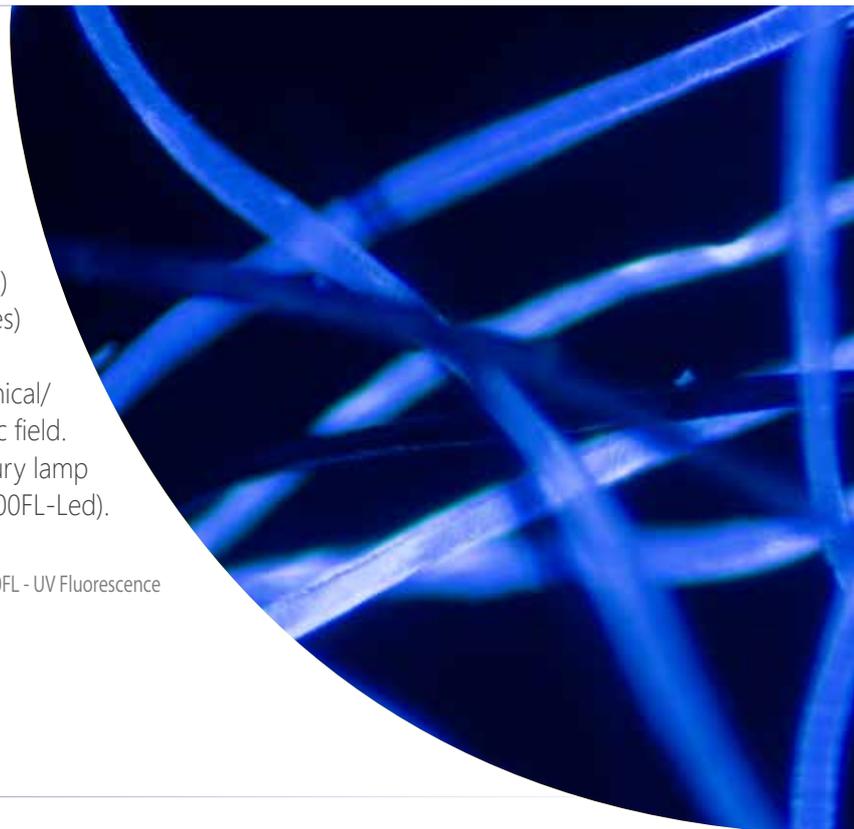
The fluorescence microscopy is the most demanding technique in biology and biomedical sciences, as well as in materials science.

This method is capable to study organic and inorganic samples thanks to primary fluorescence (auto-fluorescence) or secondary (staining and labelling with fluorochromes)

B-1000 series is tailored for applications in research and clinical/ pharmaceutical diagnostic field.

Fluorescence illuminators available as mercury lamp (B-1000FL-HBO) and also as LED (B-1000FL-Led).

Cotton fibers - B-1000FL - UV Fluorescence



## **MATERIAL SCIENCE / METALLOGRAPHY**

Reflected light microscopy is the method for observation of specimens that remain opaque even when ground to a thickness of few microns. The range of specimens falling into this category is incredibly wide and includes most metals, ores, ceramics, many polymers, semiconductors (unprocessed silicon, wafers, and integrated circuits), coal, plastics, paint, paper, wood, leather, glass inclusions, and a wide variety of specific materials.

Brass (not polished) - B-1000MET - Material Science

## **PHASE CONTRAST**

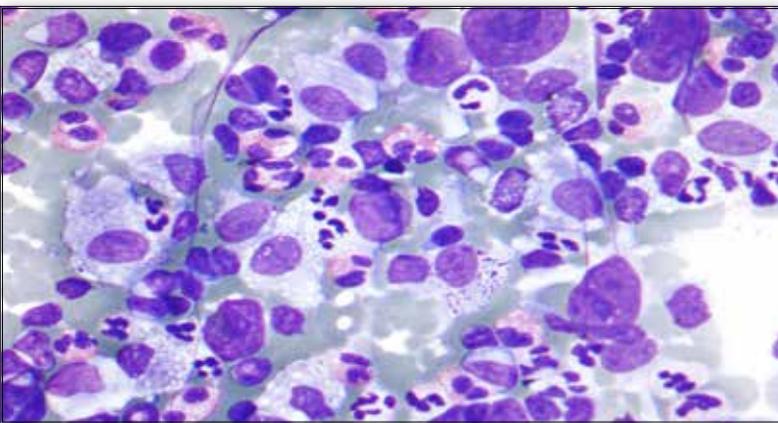
Phase-contrast microscopy is a particular technique applied in transparent, non-stainable, samples like culture of living cells, microorganisms, lithographic patterns, latex dispersions, fibers, asbestos and subcellular particles.

It reveals many cellular structures that are not visible with a simple brightfield microscope.

Diatoms - B-1000PH - Phase contrast

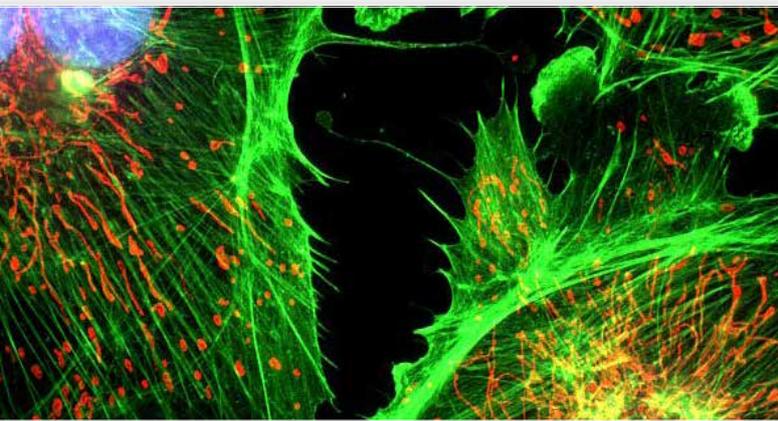
# B-800 & B-1000 Series

**B-1000** is completely designed and made in Italy to ensure the highest quality and reliability. Our designers worked on original shapes and look, to guarantee the best ergonomics and stability.



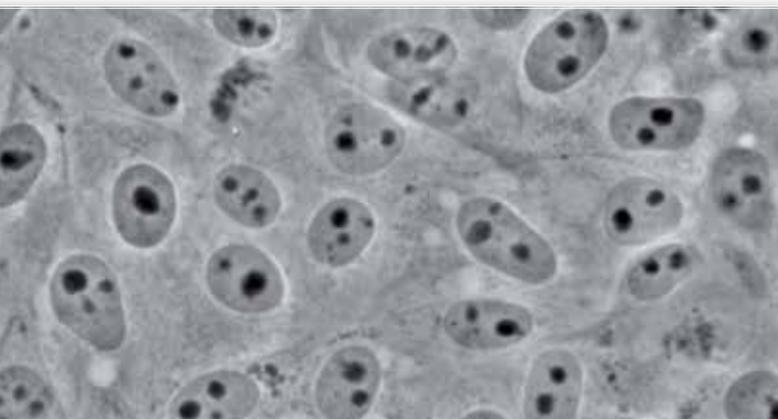
## Pathology / Cytology

Since B-800 / B-1000 use white LED illumination, they can maintain the same color temperature even if the brightness is changed. "AUTO" function automatically adjusts the light intensity when the objective is changed or the aperture diaphragm is set to a different value. These features, along with motorized stage and ergonomic controls, make your workflow easier.



## Fluorescence Microscopy

A new attachment for epi-fluorescence provides the ultimate solution in the field of fluorescence diagnostic. Vibration-free six positions filter wheel with shutter, field and aperture diaphragms, it offers all you need for a complete analysis. Custom filtersets are available and mounted on request. For application where efficiency, rapidity and ease of use are crucial, this model offers also a LED epi-fluorescence attachment, with very high power standard illuminators.



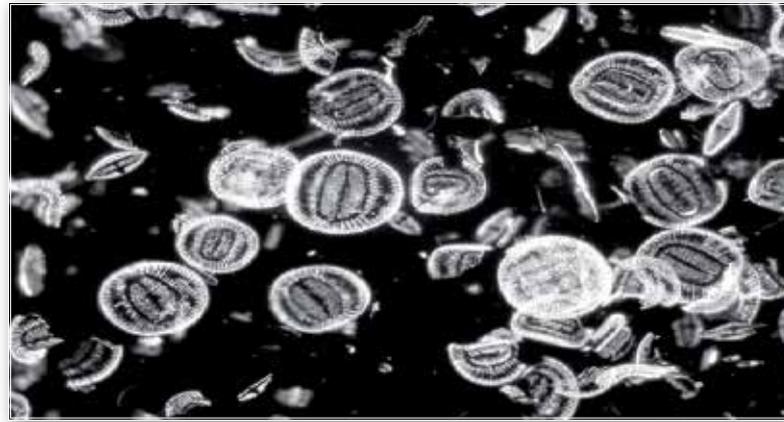
## Phase Contrast Microscopy

The bright LED illuminator brings a comfortable view in phase contrast with all magnifications. Universal wheel condenser allows to quickly switch between brightfield, darkfield and phase contrast. Ideal for clinical laboratories or fibers (e.g. asbestos) analysis.

# Observation Methods

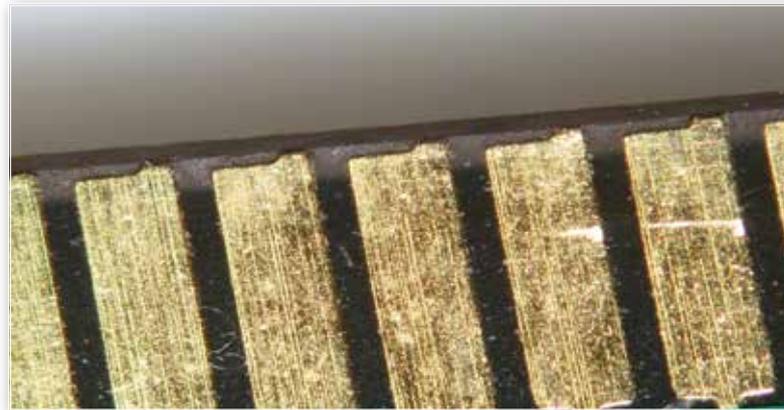
## Darkfield Microscopy

Ideal for observing blood cells, diatoms, small insects, bone, fibers, unstained bacteria, yeast, protozoa, mineral and chemical crystals, colloidal particles, dust-count specimens, and thin sections of polymers and ceramics.



## Material Science

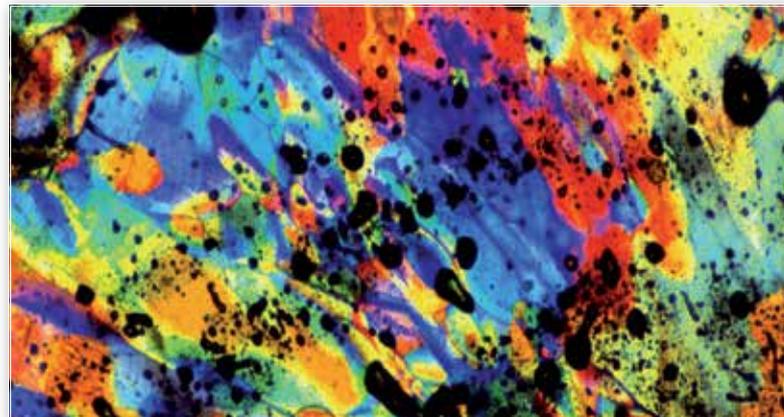
A new attachment designed specifically for metallographic inspection, with dedicated objectives set, for the most complete epi-illumination analysis: brightfield, darkfield and polarizing view.



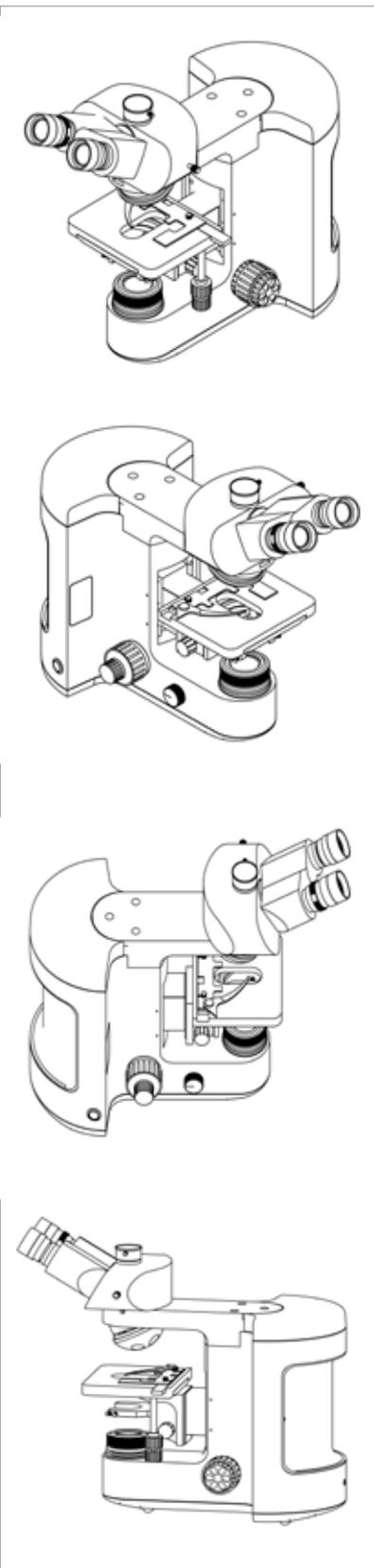
## Polarizing Microscopy

Polarized light microscopy is used in geological applications or also for both natural and industrial minerals, composites such as concretes, ceramics, mineral fibers and polymers, and crystalline or biological molecules such as DNA, starch, wood and urea.

Attachments for a full polarization analysis are available (both for transmitted and incident light), so it's possible to look at color fringes right away.



## B-800 & B-1000 Series



# Design and production

**OPTIKA** workshop provides the facilities for precise and reliable optomechanical manufacturing, essential for this kind of instruments.

CNC machining department, equipped with 5-axis milling machine and lathe.



Work in progress inside the milling machine.



Die-cast stands ready to be processed.



Microscope stands exiting from the internal varnishing facility.



All processes are carefully monitored through the application of **ISO 9001 Quality System standards.**

# B-800 & B-1000 Series

## HEADS



M-1010

Trinocular Head 100/0 - 50/50 type.



M-1013

Binocular Ergonomic Head with side Video/Photo Tube.



M-1011

Trinocular Head 100/0 - 50/50 - 0/100 type.



M-1012

Binocular Ergonomic Head.



# Choose Your Components



## EYEPIECES



**M-1001**

WF10x/22mm Eyepieces,  
high-point type.



**M-1002**

WF10x/24mm Eyepieces,  
high-point type.



**M-1003**

WF15X/16mm Eyepieces,  
high-point type.



**M-781**

WF10x/22mm Micrometer  
Eyepiece, high-point type.



**M-1004.N**

30mm diameter  
Centering telescope.

# B-800 & B-1000 Series

## NOSEPIECES



**M-1040**

Quintuple revolving Nosepiece, for RMS objectives.



**M-1041**

Sextuple revolving Nosepiece, for RMS objectives.



**M-1043**

Sextuple motorized revolving Nosepiece, for RMS objectives; with DIC slot.



**M-1044**

Quintuple revolving Nosepiece, with centrable positions for polarizing objectives.



**M-1046**

Quintuple motorized revolving Nosepiece for darkfield metallurgical objectives; with 3 ring adapters for brightfield objectives; with DIC slot.



**M-1042**

Sextuple revolving Nosepiece, for RMS objectives; with DIC slot.



**M-1045**

Quintuple revolving Nosepiece for darkfield metallurgical objectives; with 3 ring adapters for brightfield objectives ; with DIC slot.



# Choose Your Components



## OBJECTIVES



2X: M-1049  
 4X: M-1050    20X: M-1052    60X: M-1054  
 10X: M-1051    40X: M-1053    100X: M-1055

IOS W-Plan objective.



4X: M-1080  
 10X: M-1081  
 20X: M-1081.5  
 40X: M-1082  
 60X: M-1083

IOS W-Plan Pol objective.



5X: M-1109  
 10X: M-1110  
 20X: M-1111  
 40X: M-1112  
 50X: M-1113  
 100X: M-1114

IOS W-Plan Met objective, for darkfield.



4X: M-1070  
 10X: M-1071  
 20X: M-1072  
 40X: M-1073  
 100X: M-1074

IOS U-Plan semi-Apo high-grade objective.



4X: M-1060  
 10X: M-1061  
 20X: M-1062  
 40X: M-1063  
 100X: M-1064

IOS W-Plan semi-Apo objective.



5X: M-1090  
 10X: M-1091  
 20X: M-1092  
 50X: M-1093

IOS W-Plan LWD Pol objective.



10X: M-1120.N  
 20X: M-1121.N  
 40X: M-1122.N  
 100X: M-1123.N

IOS W-Plan Ph objective.



2.5X: M-1099  
 5X: M-1100  
 10X: M-1101    50X: M-1103  
 20X: M-1102    100X: M-1104

IOS W-Plan LWD Met objective, for brightfield.

# B-800 & B-1000 Series

## STAGES



**M-1140**

Standard Mechanical Stage



**M-1141**

Rackless Mechanical Stage; movement knobs with friction adjustment control



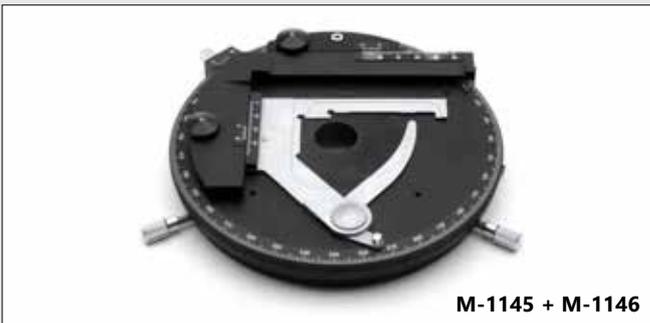
**M-1143**

MPC (mineral solid surface) rackless Mechanical Stage; movement knobs with friction adjustment control



**M-666.1**

Heating stage for temperature control of specimens.



**M-1145 + M-1146**

Rotating Stage + attachable XY stage



**M-1148**

Metallographic stage for B-1000 MET



**M-1147**

Motorized stage

## Choose Your Components



# B-800 & B-1000 Series

## CONDENSERS



**M-1150**

0.90 N.A. swing-out Condenser



**M-1151**

1.20 N.A. swing-out Condenser



**M-1153**

0.90 N.A. swing-out Polarizing Condenser



**M-1154**

0.70 N.A. swing-out Condenser



**M-1155**

0.90/0.25 N.A. Swing-Out Condenser, low magnification.



**M-618**

Darkfield Condenser (dry).



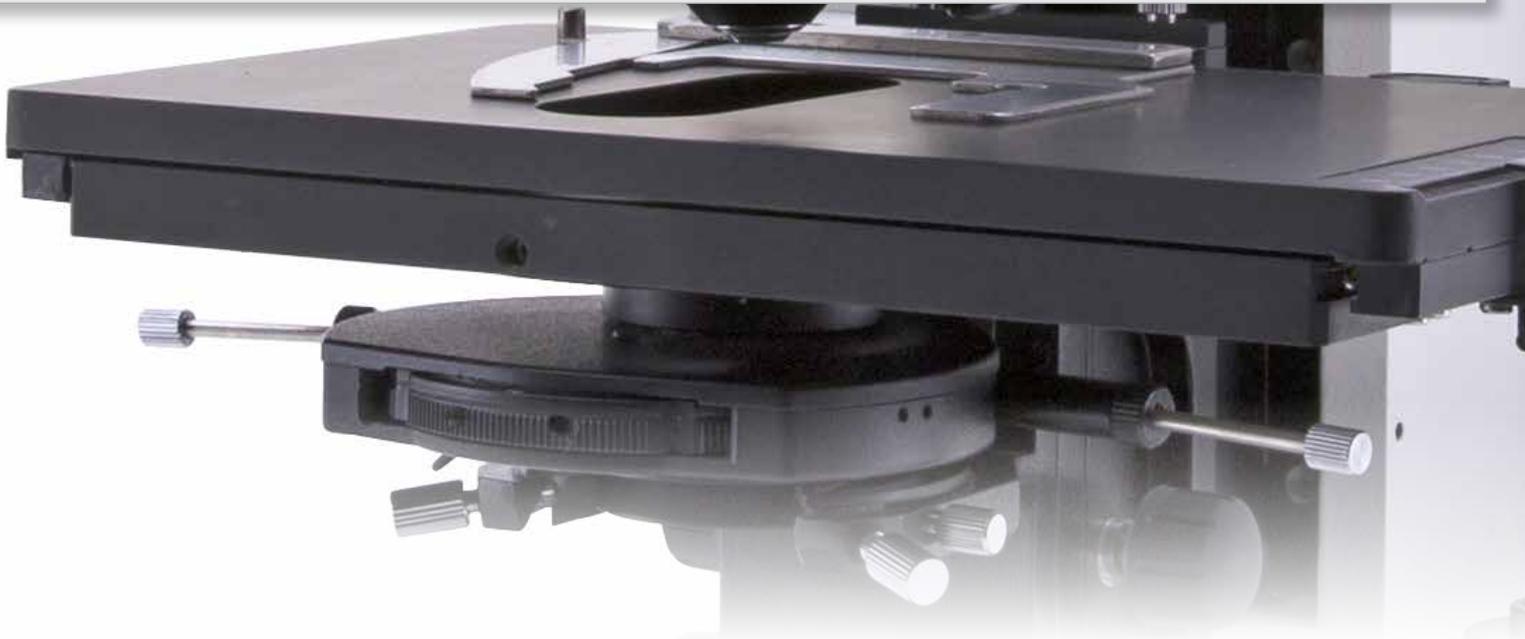
**M-1152.N**

Phase contrast condenser 10x, 20x, 40x, 100x, BF, DF



**M-1124**

Phase contrast condenser with insert slide 10x-40x



# Choose Your Components

## FLUORESCENCE ATTACHMENTS



4-position LED Fluorescence Attachment



6-position HBO Fluorescence attachment

## POLARIZING ATTACHMENTS



Bertrand Lens with analyzer and Lambda slides slot



Incident Polarizing Light attachment, with field and aperture diaphragms

## DISCUSSION HEADS



- M-1160** - 2-Head attachment
- M-1161** - 3-Head attachment
- M-1162** - 5-Head attachment
- M-1163** - 10-Head attachment

## METALLURGICAL ATTACHMENT



Metallurgical Brightfield/Darkfield attachment, with field and aperture diaphragms, neutral density filter, and polarizer/analyzer filters.

# B-800 & B-1000 Optical performance

	Eyepiece		10x (M-1001)		
	Field number (mm)		22		
Objective code	Objective	N.A.	W.D. (mm)	Total magnification	Field number (mm)
M-1049	IOS W-PLAN OBJECTIVE 2X	0.08	19.4	20x	11
M-1050	IOS W-PLAN OBJECTIVE 4X	0.1	11.9	40x	5.5
M-1051	IOS W-PLAN OBJECTIVE 10X	0.25	12.1	100x	2.2
M-1052	IOS W-PLAN OBJECTIVE 20X	0.4	1.5	200x	1.1
M-1053	IOS W-PLAN OBJECTIVE 40X	0.65	0.36	400x	0.55
M-1054	IOS W-PLAN OBJECTIVE 60X	0.85	0.3	600x	0.37
M-1055	IOS W-PLAN OBJECTIVE 100X	1.25 (oil)	0.18	1000x	0.22

M-1060	IOS W-PLAN SEMI-APO OBJECTIVE 4X	0.13	4.7	40	5.5
M-1061	IOS W-PLAN SEMI-APO OBJECTIVE 10X	0.3	4.1	100	2.2
M-1062	IOS W-PLAN SEMI-APO OBJECTIVE 20X	0.5	1.45	200	1.1
M-1063	IOS W-PLAN SEMI-APO OBJECTIVE 40X	0.75	0.5	400	0.55
M-1064	IOS W-PLAN SEMI-APO OBJECTIVE 100X	1.3 (oil)	0.08	1000	0.22

M-1070	IOS U-PLAN SEMI-APO HIGH-GRADE OBJECTIVE 4X	0.13	15.13	40	5.5
M-1071	IOS U-PLAN SEMI-APO HIGH-GRADE OBJECTIVE 10X	0.3	8.53	100	2.2
M-1072	IOS U-PLAN SEMI-APO HIGH-GRADE OBJECTIVE 20X	0.5	2.33	200	1.1
M-1073	IOS U-PLAN SEMI-APO HIGH-GRADE OBJECTIVE 40X	0.75	0.55	400	0.55
M-1074	IOS U-PLAN SEMI-APO HIGH GRADE OBJECTIVE 100X	1.28 (oil)	0.21	1000	0.22

M-1120.N	IOS W-PLAN PH OBJECTIVE 10X	0.25	10	100	2.2
M-1121.N	IOS W-PLAN PH OBJECTIVE 20X	0.4	5.1	200	1.1
M-1122.N	IOS W-PLAN PH OBJECTIVE 40X	0.65	0.54	400	0.55
M-1123.N	IOS W-PLAN PH OBJECTIVE 100X	1.25 (oil)	0.13	1000	0.22

M-1080	IOS W-PLAN POL OBJECTIVE 4X	0.1	20.8	40	5.5
M-1081	IOS W-PLAN POL OBJECTIVE 10X	0.25	5.3	100	2.2
M-1081.5	IOS W-PLAN POL OBJECTIVE 20X	0.45	1.56	200	1.1
M-1082	IOS W-PLAN POL OBJECTIVE 40X	0.65	0.36	400	0.55
M-1083	IOS W-PLAN POL OBJECTIVE 60X	0.85	0.3	600	0.37

M-1099	IOS W-PLAN LWD MET OBJECTIVE 2,5X (WITH DEPOLARIZER), FOR BRIGHTFIELD	0.08	11.3	25	0.88
M-1100	IOS W-PLAN LWD MET OBJECTIVE 5X, FOR BRIGHTFIELD	0.15	10.8	50	4.4
M-1101	IOS W-PLAN LWD MET OBJECTIVE 10X, FOR BRIGHTFIELD	0.3	10	100	2.2
M-1102	IOS W-PLAN LWD MET OBJECTIVE 20X, FOR BRIGHTFIELD	0.45	4	200	1.1
M-1103	IOS W-PLAN LWD MET OBJECTIVE 50X, FOR BRIGHTFIELD	0.55	7.8	500	0.44
M-1104	IOS W-PLAN LWD MET OBJECTIVE 100X (DRY), FOR BRIGHTFIELD	0.8 (dry)	2.1	1000	0.22

M-1109	IOS W-PLAN MET OBJECTIVE 5X, FOR DARKFIELD	0.12	12	50	4.4
M-1110	IOS W-PLAN MET OBJECTIVE 10X, FOR DARKFIELD	0.25	10	100	2.2
M-1111	IOS W-PLAN MET OBJECTIVE 20X, FOR DARKFIELD	0.4	4.3	200	1.1
M-1112	IOS W-PLAN MET OBJECTIVE 40X, FOR DARKFIELD	0.6	2.9	400	0.55
M-1113	IOS W-PLAN MET OBJECTIVE 50X, FOR DARKFIELD	0.75	0.32	500	0.44
M-1114	IOS W-PLAN MET OBJECTIVE 100X (DRY), FOR DARKFIELD	0.8 (dry)	2	1000	0.22

M-1090	IOS W-PLAN LWD POL OBJECTIVE 5X	0.15	10.8	50	4.4
M-1091	IOS W-PLAN LWD POL OBJECTIVE 10X	0.3	10	100	2.2
M-1092	IOS W-PLAN LWD POL OBJECTIVE 20X	0.45	4	200	1.1
M-1093	IOS W-PLAN LWD POL OBJECTIVE 50X	0.55	7.9	500	0.44

10x (M-1002)		15x (M-1003)	
24		16	
Total magnification	Field number (mm)	Total magnification	Field number (mm)
20	12	30	7.5
40	6	60	3.75
100	2.4	150	1.5
200	1.2	300	0.75
400	0.6	600	0.37
600	0.4	900	0.25
1000	0.24	1500	0.15

40	6	60	3.75
100	2.4	150	1.5
200	1.2	300	0.75
400	0.6	600	0.37
1000	0.24	1500	0.15

40	6	60	3.75
100	2.4	150	1.5
200	1.2	300	0.75
400	0.6	600	0.37
1000	0.24	1500	0.15

100	2.4	150	1.5
200	1.2	300	0.75
400	0.6	600	0.37
1000	0.24	1500	0.15

40	6	60	3.75
100	2.4	150	1.5
200	1.2	300	0.75
400	0.6	600	0.37
600	0.4	900	0.25

25	9.6	37.5	10
50	4.8	75	3
100	2.4	150	1.5
200	1.2	300	0.75
500	0.48	750	0.3
1000	0.24	1500	0.15

50	4.8	75	3
100	2.4	150	1.5
200	1.2	300	0.75
400	0.6	600	0.37
500	0.48	750	0.3
1000	0.24	1500	0.15

50	4.8	75	3
100	2.4	150	1.5
200	1.2	300	0.75
500	0.48	750	0.3



## Icons

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Trinocular



Rotating head 360°



Field number



Infinity-corrected optics



X-LED illuminator



Max. magnification



Transmitted light



Incident light



Automatic light control



Polarized light



Anti-fungus treatment

## B-800 & B-1000 Models

### *B-800 Models*

**B-800**- Brightfield Research Microscope page 26

### *B-1000 Models*

**B-1000BF**- Brightfield Research Microscope page 28

**B-1000PH** - Phase Contrast Research Microscope page 30

**B-1000FL-LED** - Led Fluorescence Research Microscope page 32

**B-1000FL-HBO** - HBO Fluorescence Research Microscope page 34

**B-1000POL** - Transmitted Polarizing Research Microscope page 36

**B-1000POL-I** - Transmitted And Incident Polarizing Research Microscope page 38

**B-1000MET** - Upright Advanced Metallurgical Microscope page 40

**B-1000 MULTIHEAD** - Discussion Microscope With Built-In Movable Pointer page 42

# B-800 Series - Overview

B-800 and B-1000 Series incorporate all the experience gathered by OPTIKA Microscopes in the field of light microscopy, adapted specifically for routine and research laboratory brightfield applications. These microscopes combine ergonomic design for comfortable long-term use, enabling operation with minimal movements, with modularity, offering the possibility to create customized versions.

## B-800



### Brightfield Research Microscope

Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomics and transmitted light (X-LED<sup>3</sup> system) observation.



# B-800 - Configuration Chart

Build the microscope that suits your needs by choosing among the components



**M-1020**  
Body with manual focus



- M-1050** 4x
- M-1051** 10x
- M-1052** 20x
- M-1053** 40x
- M-1054** 60x
- M-1055** 100x



- M-1060** 4x
- M-1061** 10x
- M-1062** 20x
- M-1063** 40x
- M-1064** 100x

- M-1120.N** 10x      **M-1122.N** 40x
- M-1121.N** 20x      **M-1123.N** 100x

**M-1140**  
Standard stage



B-800

# B-1000 Series - Overview

This series incorporates all the experience gathered by OPTIKA Microscopes in the field of light microscopy, adapted specifically for routine laboratory brightfield applications. These microscopes are suitable for routine microscopy and have an ergonomic design for comfortable long-term use.

All main controls are located close to each other, which enable operation with minimal movements.

## B-1000BF



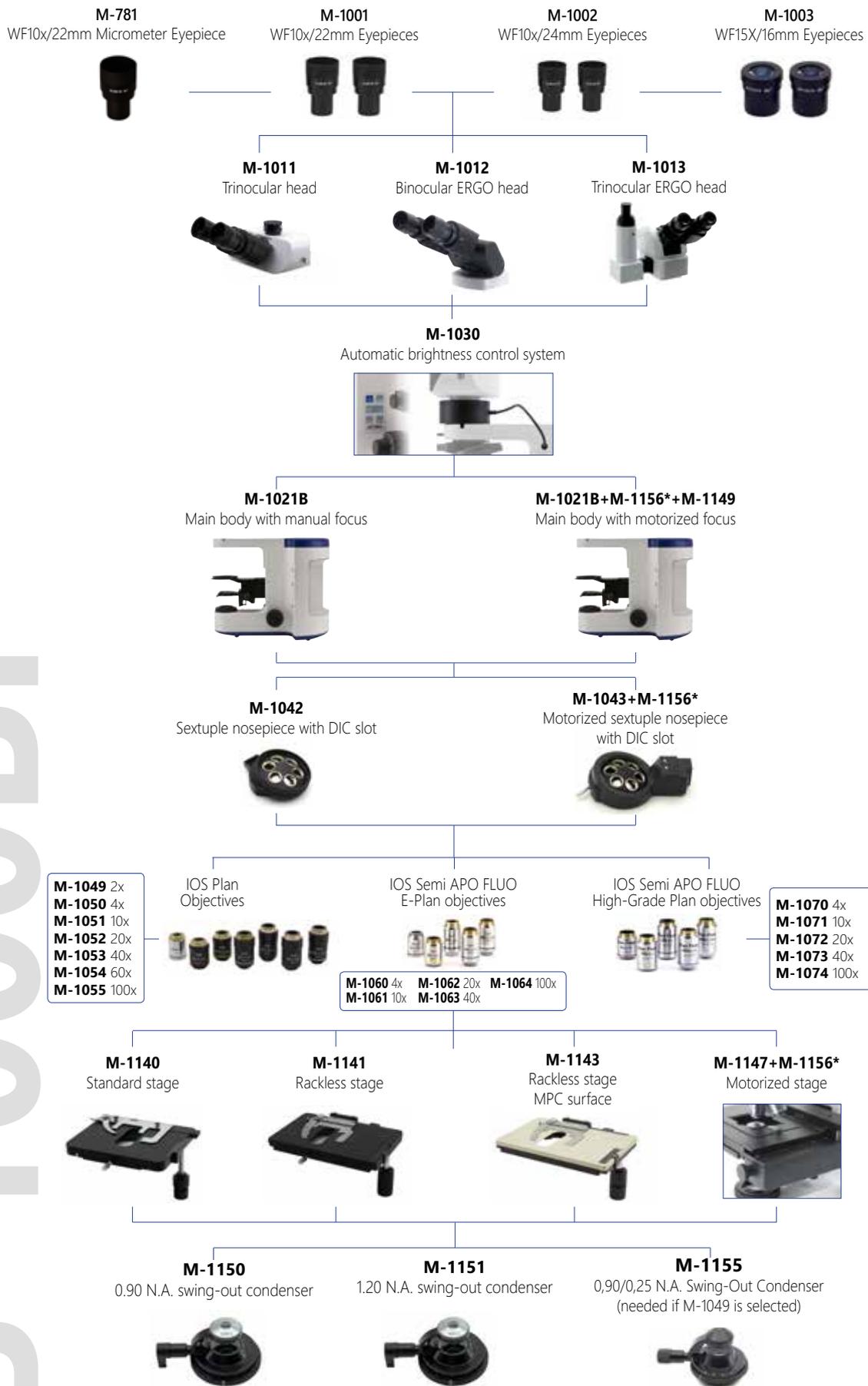
### Brightfield Research Microscope

Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomics and transmitted light (X-LED8 system) observation. Fully modular, B-1000 Series gives multiple options of configuration: manual or motorized system, with the possibility of automatic brightness control system and a wide variety of objectives and stages.



# B-1000BF - Configuration Chart

Build the microscope that suites your needs by choosing among the components



\* Code M-1156 must be added only **once** for any motorized configuration

B-1000BF

# B-1000PH - Overview



## Phase Contrast Research Microscope

Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomics and transmitted light (X-LED8 system) observation.

Fully modular, B-1000 Series gives multiple options of configuration in phase contrast mode: manual or motorized system, with the possibility of automatic brightness control system and a wide variety of objectives and stages.



# B-1000PH - Configuration Chart

Build the microscope that suites your needs by choosing among the components



\* Code M-1156 must be added only **once** for any motorized configuration

B-1000PH

# B-1000FL-LED - Overview



## LED Fluorescence Research Microscope

Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomics and both transmitted (X-LED8 system) and incident light observation.

Fully modular, B-1000 Series gives multiple options of configuration: manual or motorized system, plus a wide variety of objectives and stages.



Dedicated version for LED epi-fluorescence analysis with transmitted (X-LED8, 8W power) and epi-fluorescence (special attachment with built-in high-power colored LEDs) illumination.

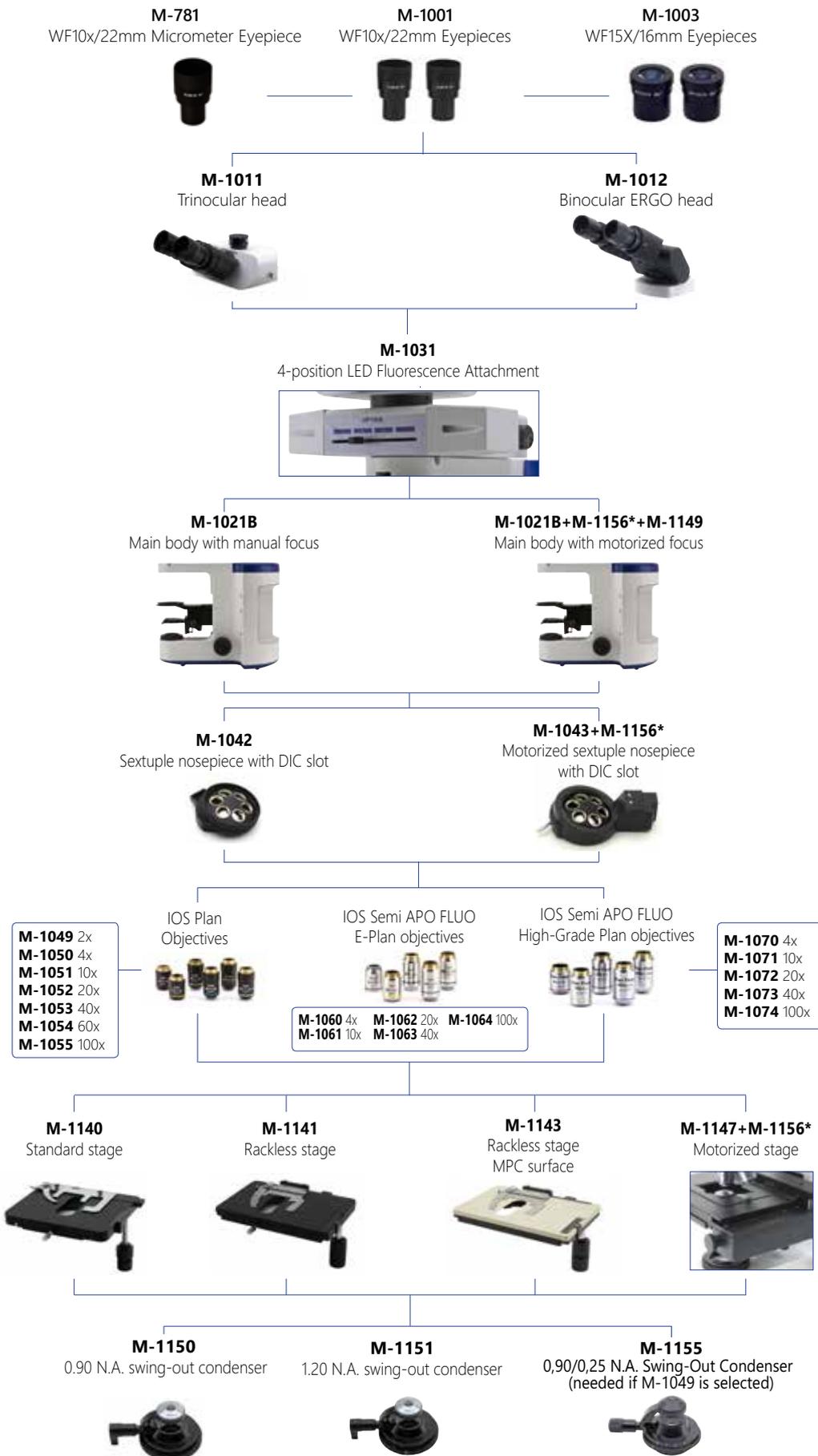
- Eliminate warm-up/cool down times
- Pre-centered system
- Extended LED lifetime
- Reduced power consumptions
- Lowest operational costs ensured

### Standard filtersets (included)

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter wavelength (nm)
B (Blue)	450-490	495	520LP
G (Green)	500-540	565	575LP

# B-1000FL-LED - Configuration Chart

Build the microscope that suites your needs by choosing among the components



\* Code M-1156 must be added only **once** for any motorized configuration

B-1000FL-LED

# B-1000FL-HBO - Overview



## HBO Fluorescence Research Microscope

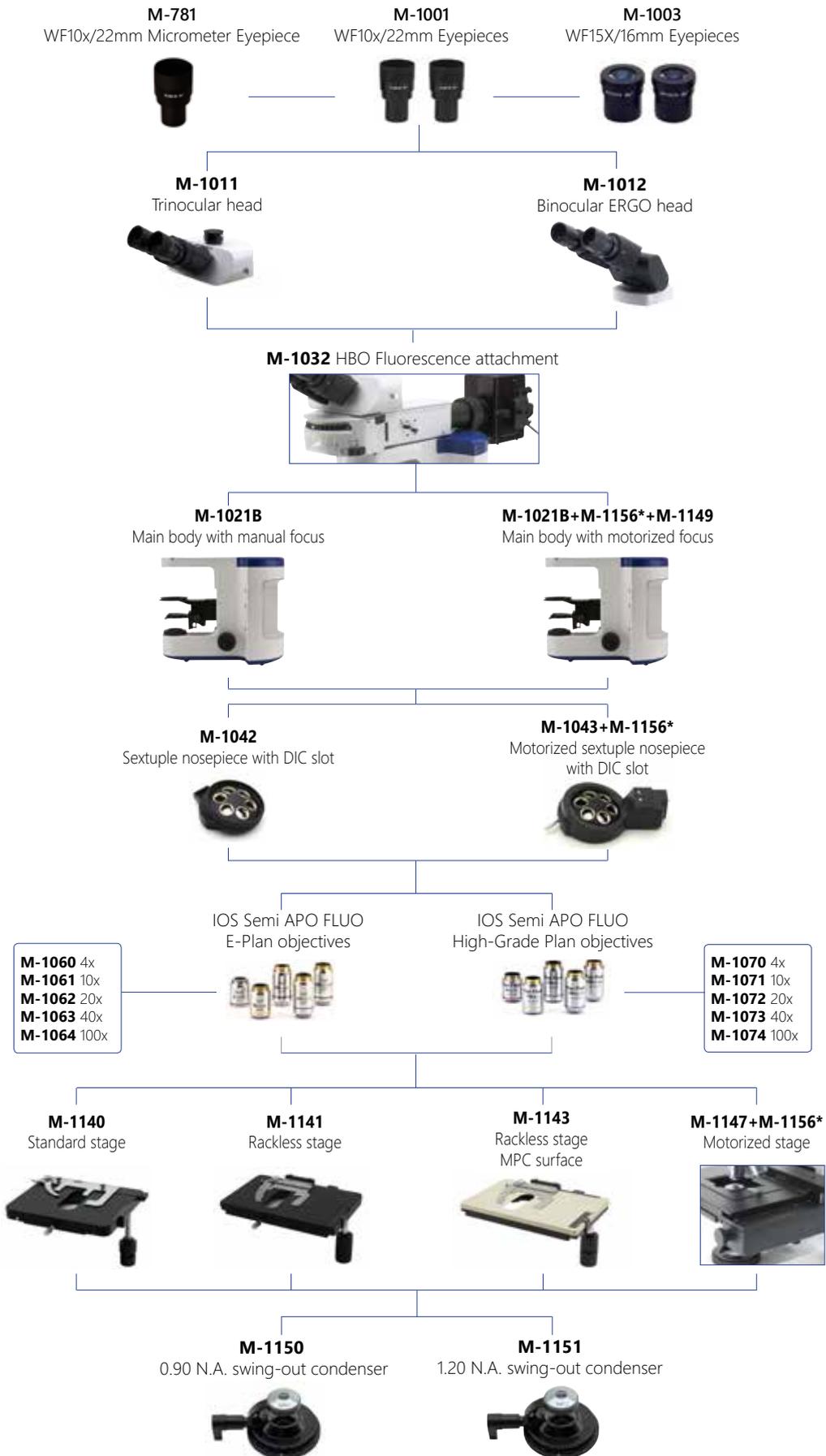
Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomics and both transmitted (X-LED8 system) and incident light observation, with the possibility to use several filters.

Fully modular, B-1000 Series gives multiple options of configuration: manual or motorized system, plus a wide variety of objectives and stages.



# B-1000FL-HBO - Configuration Chart

Build the microscope that suites your needs by choosing among the components



\* Code M-1156 must be added only **once** for any motorized configuration

B-1000FL-HBO

# B-1000POL - Overview



## Transmitted Polarizing Research Microscope

Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomics and transmitted (X-LED8 system) light observation.

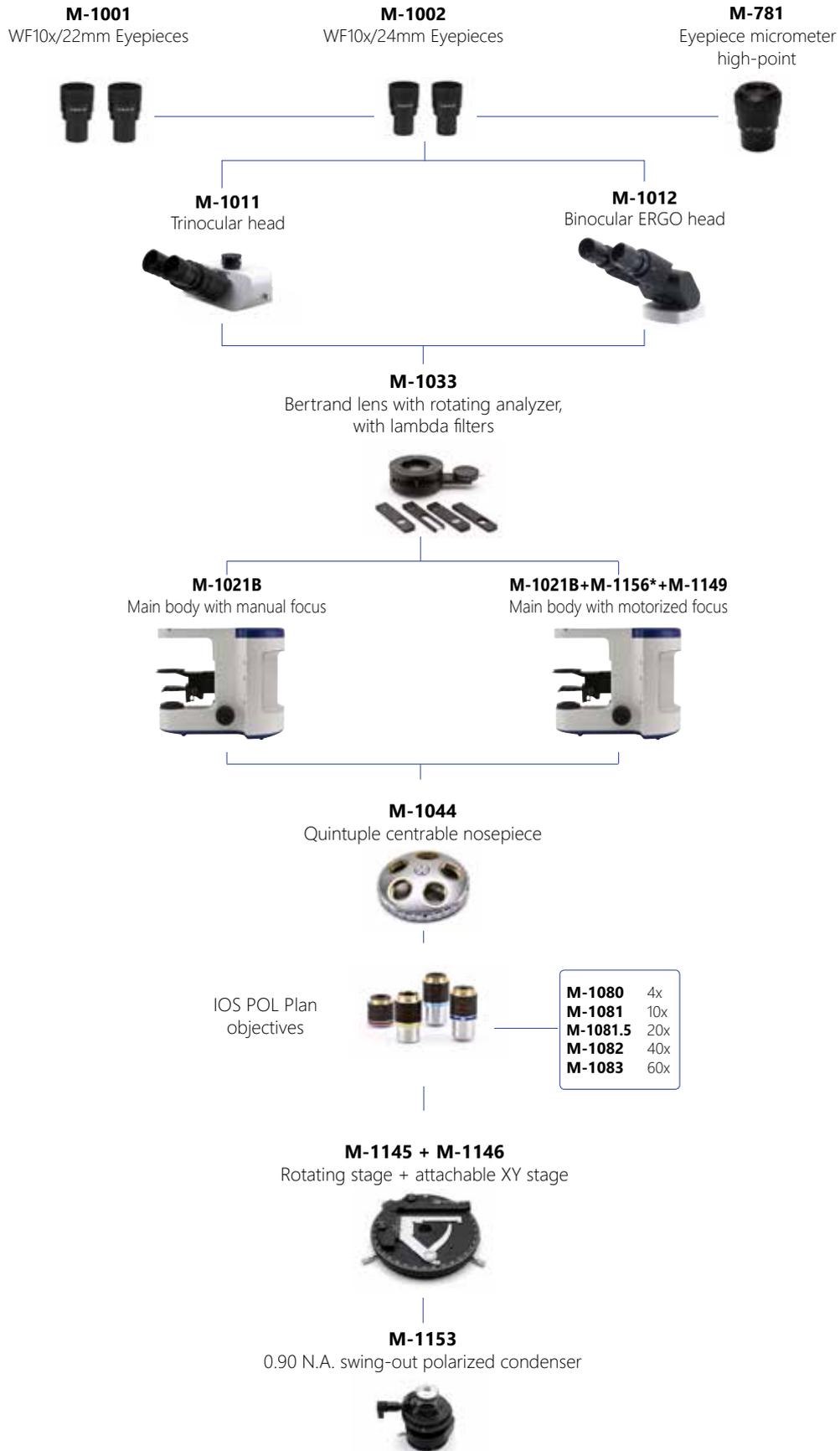
Fully modular, B-1000 Series gives multiple options of configuration, including manual or motorized system.



Dedicated version for transmitted (X-LED<sup>®</sup>, 8W power) illumination and polarization analysis.

# B-1000POL - Configuration Chart

Build the microscope that suites your needs by choosing among the components



\* Code M-1156 must be added only **once** for any motorized configuration

B-1000POL

# B-1000POL-I - Overview



## Transmitted & Incident Polarizing Research Microscope

Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomics and transmitted (X-LED8 system) and incident (specific high-power white LED) light observation.

Fully modular, B-1000 Series gives multiple options of configuration, including manual or motorized system.



Dedicated version for transmitted (X-LED<sup>8</sup>, 8W power) and incident (special attachment with built-in high-power white LED) illumination.



# B-1000POL-I - Configuration Chart

Build the microscope that suites your needs by choosing among the components



\* Code M-1156 must be added only **once** for any motorized configuration

B-1000POL-I

# B-1000MET - Overview



## Metallurgical Research Microscope

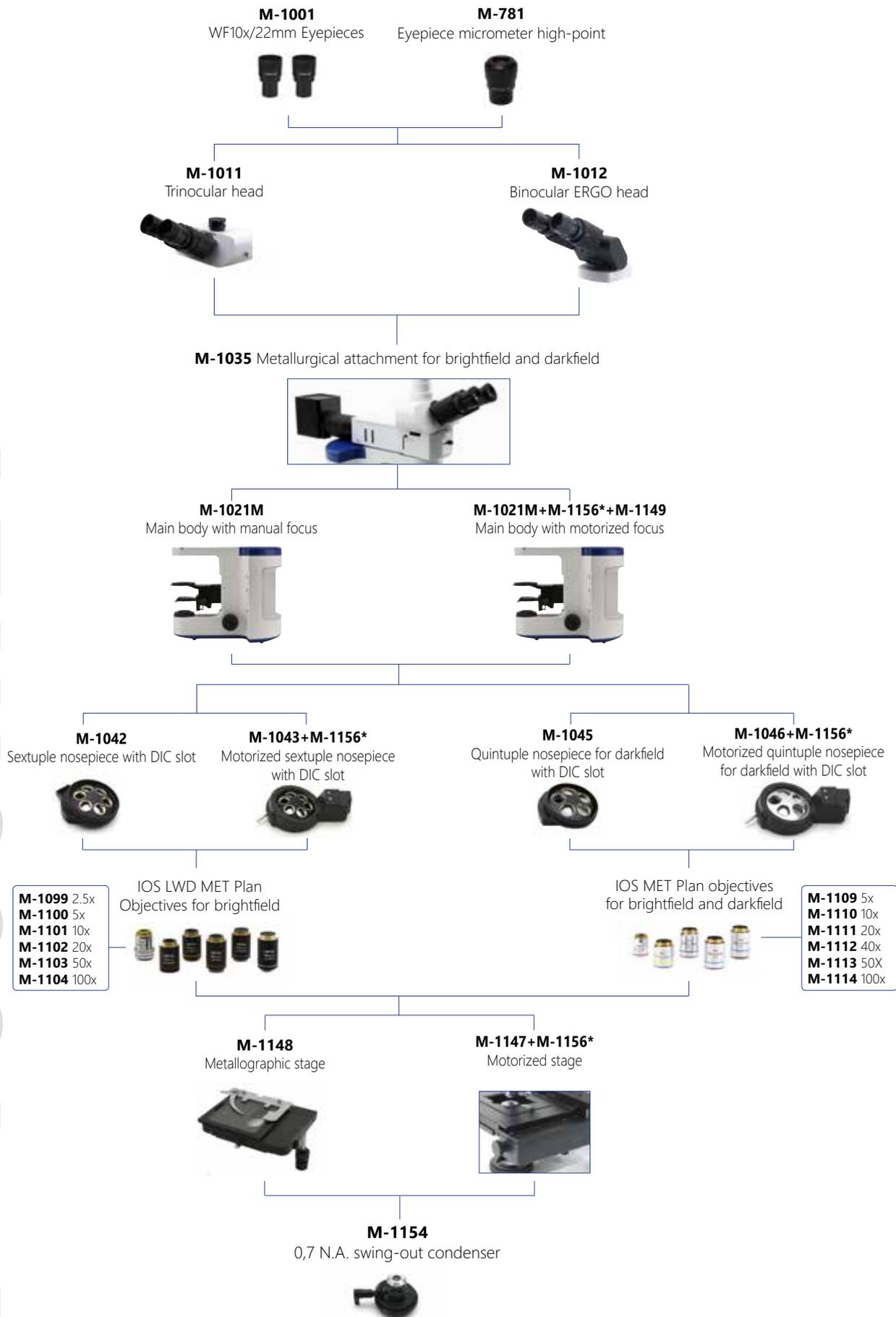
Laboratory microscope for routine and research applications with dye-cast frame for high stability, excellent ergonomoy and transmitted (X-LED8 system) and incident (100W halogen lamp) light observation.

Fully modular, B-1000 Series gives multiple options of configuration, including manual or motorized system and two lines of MET objectives (one both for brightfield and darkfield).



# B-1000MET - Configuration Chart

Build the microscope that suites your needs by choosing among the components



\* Code M-1156 must be added only **once** for any motorized configuration

B-1000MET

# B-1000 Series - Overview

Teaching and discussion microscopes provide the ability for multiple people to view a specimen simultaneously - perfect for the teaching environment. The main head is equipped with an LED movable pointer to make it easier to show students specific aspects of samples while simultaneously looking through the microscope. Options are available for up to 10 heads on a multi-head teaching microscope system:

**B-1000Ti-2** - multi-head microscope for 2 users

**B-1000Ti-3** - multi-head microscope for 3 users

**B-1000Ti-5** - multi-head microscope for 5 users

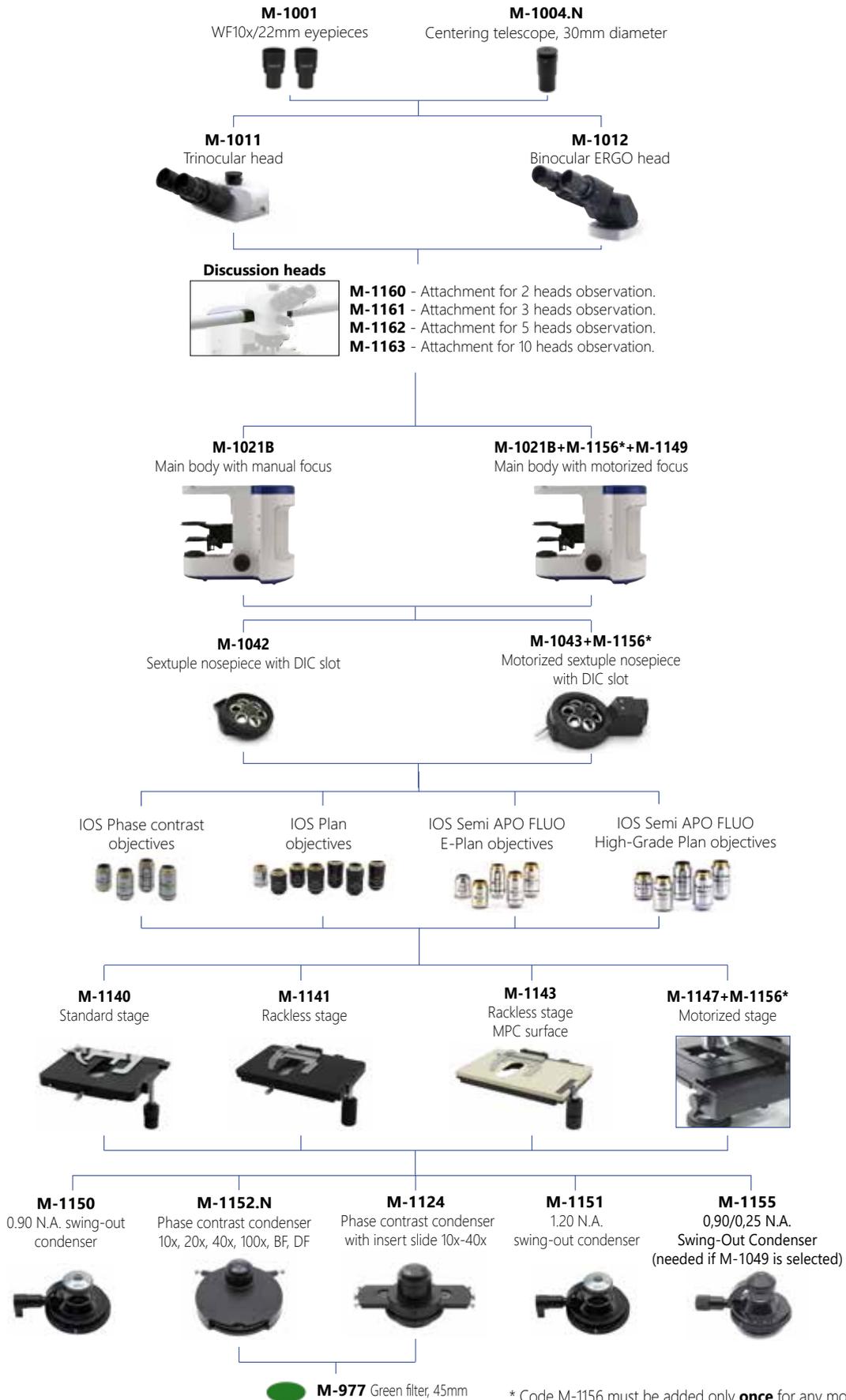
**B-1000Ti-10** - multi-head microscope for 10 users



# B-1000 Multi-Head - Configuration Chart

# B-1000 Multi-Head

Build the microscope that suites your needs by choosing among the components



# B-800 Series - Accessories

## EYEPIECES

- M-1001 WF10x/22mm eyepieces (pair)
- M-781 WF10x/22mm micrometer eyepiece (10mm, 0.1mm div.)
- M-1003 WF15X/16mm eyepieces (Pair)

## HEADS

- M-1010 Trinocular Head (2 positions)
- M-1012 Binocular ERGO head
- M-1013 Trinocular ERGO head

## MAIN BODY

- M-1020 Main body with focus system and X-LED3 illumination

## NOSEPIECES

- M-1040 Quintuple nosepiece for RMS objectives
- M-1041 Sextuple nosepiece for RMS objectives

## OBJECTIVES

- M-1050 IOS W-Plan objective 4x/0.10
- M-1051 IOS W-Plan objective 10x/0.25
- M-1052 IOS W-Plan objective 20x/0.40
- M-1053 IOS W-Plan objective 40x/0.65
- M-1054 IOS W-Plan objective 60x/0.80
- M-1055 IOS W-Plan objective 100x/1.25 (Oil)
  
- M-1060 IOS W-Plan semi-Apo objective 4x/0.13
- M-1061 IOS W-Plan semi-Apo objective 10x/0.30
- M-1062 IOS W-Plan semi-Apo objective 20x/0.50
- M-1063 IOS W-Plan semi-Apo objective 40x/0.75
- M-1064 IOS W-Plan semi-Apo objective 100x/1.30 (Oil)
  
- M-1120.N IOS W-Plan Ph objective 10x/0.25
- M-1121.N IOS W-Plan Ph objective 20x/0.40
- M-1122.N IOS W-Plan Ph objective 40x/0.65
- M-1123.N IOS W-Plan Ph objective 100x/1.25 (Oil)

## STAGES

- M-1140 Standard Mechanical Stage
- M-1141 Belt Drive Mechanical Stage
- M-1143 MPC (Mineral Solid Surface) Belt Drive Mechanical Stage
- M-1144 Heating Stage

## CONDENSERS

- M-1150 0,90 N.A. Swing-Out Condenser
- M-1151 1,25 N.A. Swing-Out Condenser
- M-1124 Phase Contrast Condenser with insert slide 10x-40x
- M-1152.N Phase Contrast Condenser 10x, 20x, 40x, 100x, BF and DF
- M-618 Darkfield Condenser for dry objectives

## ACCESSORIES

- M-1004.N Centering telescope, 30mm diameter
- M-005 Micrometric slide, 26x76mm, range 1mm, div. 0,01mm
- M-613 Polarizing set (filters only)
- M-615 Lambda filter for polarizing set
- M-977 Green filter, 45mm diameter
- M-690 Eyecup (pair)
- M-619 Photo adapter for REFLEX camera with FULL FRAME sensor
- M-173 Photo adapter for APS-C and FULL FRAME Reflex cameras
- 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-113.1 Ring adapter, 30mm (for monocular and binocular microscopes)
- M-114 C-Mount adapter for 1/2" sensor.
- M-115 C-Mount adapter for 1/3" sensor.
- M-116 C-Mount adapter for 2/3" sensor.
- M-617.1N Phase contrast set with IOS PLAN objective 40x
- 15104 OPTIKA lens cleaning kit
- 15008 OPTIKA immersion oil, 10ml



# B-1000 Series - Accessories

## EYEPIECES

M-1001	WF10x/22mm eyepiece (pair)
M-781	WF10x/22mm micrometer eyepiece (10mm, 0.1mm div.)
M-1002	WF10x/24mm eyepiece (pair)
M-1003	WF15X/16mm (pair)

## HEADS

M-1011	Trinocular Head (3 positions)
M-1012	Binocular ERGO head
M-1013	Trinocular ERGO head

## MAIN BODY

M-1021B	Main body with focus system and X-LED8 illumination, general purpose
M-1021M	Main body with focus system and X-LED8 illumination, for Metallurgical model
M-1156	Upgrade (controller) for any kind of motorization (stage, Z-axis, nosepiece, or all of them together)
M-1149	Motorization of Z-axis

## ATTACHMENTS

M-1030	Automatic Brightness Control System
M-1031	4-Position LED Fluorescence attachment, with standard Blue and Green filtersets (FITC & TRITC)
M-1032	6-Position HBO Fluorescence attachment, with standard Blue and Green filtersets (FITC & TRITC)
M-1033	Bertrand Lens with Analyzer and slot for slides (with Lambda, 1/4 Lambda and Quartz Edge)
M-1034	Incident Polarizing Attachment
M-1035	Metallurgical Attachment

## NOSEPIECES

M-1042	Sextuple nosepiece for RMS objectives with DIC slot
M-1043	Sextuple motorized nosepiece for RMS objectives with DIC slot
M-1044	Quintuple nosepiece with centrabale positions for POL objectives
M-1045	Quintuple nosepiece for Darkfield MET objectives, with 3 adater rings for RMS objectives with DIC slot
M-1046	Quintuple motorized nosepiece for Darkfield MET objectives, with 3 adapter rings for RMS objectives with DIC slot

## OBJECTIVES

M-1049	IOS W-plan objective 2x/0.08 (Not for B-1000Ph, B-1000Pol, B-1000Pol-i and B-1000MET)
M-1050	IOS W-Plan objective 4x/0.10
M-1051	IOS W-Plan objective 10x/0.25
M-1052	IOS W-Plan objective 20x/0.40
M-1053	IOS W-Plan objective 40x/0.65
M-1054	IOS W-Plan objective 60x/0.80
M-1055	IOS W-Plan objective 100x/1.25 (Oil)
M-1060	IOS W-Plan semi-Apo objective 4x/0.13
M-1061	IOS W-Plan semi-Apo objective 10x/0.30
M-1062	IOS W-Plan semi-Apo objective 20x/0.50
M-1063	IOS W-Plan semi-Apo objective 40x/0.75
M-1064	IOS W-Plan semi-Apo objective 100x/1.30 (Oil)
M-1070	IOS U-Plan semi-Apo high-grade objective 4x/0.13
M-1071	IOS U-Plan semi-Apo high-grade objective 10x/0.30
M-1072	IOS U-Plan semi-Apo high-grade objective 20x/0.50
M-1073	IOS U-Plan semi-Apo high-grade objective 40x/0.75
M-1074	IOS U-Plan semi-Apo high grade objective 100x/1.30 (Oil)
M-1080	IOS W-Plan Pol objective 4x/0.10
M-1081	IOS W-Plan Pol objective 10x/0.25
M-1081.5	IOS W-Plan Pol objective 20x/0.45
M-1082	IOS W-Plan Pol objective 40x/0.65
M-1083	IOS W-Plan Pol objective 60x/0.85
M-1090	IOS W-Plan lwd Pol objective 5x/0.15
M-1091	IOS W-Plan lwd Pol objective 10x/0.30
M-1092	IOS W-Plan lwd Pol objective 20x/0.45
M-1093	IOS W-Plan lwd Pol objective 50x/0.75

M-1099	IOS W-Plan lwd Met objective 2,5x/0.08 (with depolarizer), for brightfield
M-1100	IOS W-Plan lwd Met objective 5x/0.15, For brightfield
M-1101	IOS W-Plan lwd Met objective 10x/0.3, For brightfield
M-1102	IOS W-Plan lwd Met objective 20x/0.45,For brightfield
M-1103	IOS W-Plan lwd Met objective 50x/0.55, For brightfield
M-1104	IOS W-Plan lwd Met objective 100x/0.80 (Dry), for brightfield

M-1109	IOS W-Plan Met objective 5x/0.12, for darkfield
M-1110	IOS W-Plan Met objective 10x/0.25, for darkfield
M-1111	IOS W-Plan Met objective 20x/0.40, for darkfield
M-1112	IOS W-Plan Met objective 40x/0.60, for darkfield
M-1113	IOS W-Plan Met objective 50x/0.75, for darkfield
M-1114	IOS W-Plan Met objective 100x/0.80 (dry), for darkfield

M-1120.N	IOS W-Plan Ph objective 10x/0.25
M-1121.N	IOS W-Plan Ph objective 20x/0.40
M-1122.N	IOS W-Plan Ph objective 40x/0.65
M-1123.N	IOS W-Plan Ph objective 100x/1.25 (Oil)

## STAGES

M-1140	Standard Mechanical Stage
M-1141	Belt Drive Mechanical Stage
M-1143	MPC (Mineral Solid Surface) Belt Drive Mechanical Stage
M-1144	Heating Stage
M-1145	Rotating Stage, centrabale
M-1146	Attachable mechanical stage for rotating Stage
M-1147	Motorized mechanical Stage
M-1148	Metallurgical Stage, with glass

## CONDENSERS

M-1150	0,90 N.A. Swing-Out Condenser
M-1155	0.9/0.25 NA Swing-Out Condenser (to be used with objective M-1049)
M-1151	1,25 N.A. Swing-Out Condenser
M-1124	Phase contrast condenser with insert slide 10x-40x
M-1152.N	Phase contrast condenser 10x, 20x, 40x, 100x, BF and DF
M-1153	0,90 N.A. Swing-Out POL Condenser
M-1154	0,70 N.A. Swing-Out MET Condenser
M-618	Darkfield condenser for dry objectives

## MULTI-HEAD ATTACHMENTS

M-1160	2-Head attachment
M-1161	3-Head Attachment
M-1162	5-Head Attachment
M-1163	10-Head attachment

## ACCESSORIES

M-1004.N	Centering telescope, 30mm diameter
M-005	Micrometric slide, 26x76mm, range 1mm, div. 0,01mm
M-613	Polarising set (Polarizer and Analyzer filters)
M-615	Lambda filter for polarizing set
M-617.1N	Phase Contrast set with IOS PLAN objective 40x
M-977	Green filter, 45mm diameter
M-ND25	Neutral density filter ND25 (for B-1000FL-HBO)
M-690	Eyecup (pair)
M-619	Photo adapter for REFLEX camera, with FULL FRAME sensor
M-173	Photo adapter for APS-C and FULL FRAME Reflex cameras
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-113.1	Ring adapter, 30mm (for monocular and binocular microscopes)
M-114	C-Mount adapter for 1/2" sensor.
M-115	C-Mount adapter for 1/3" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-151	HBO 100W high-pressure mercurybulb for fluorescence
CL-35	Halogen Lamp 24V 100W (only for metallurgical attachment M-1035)
M-1164	Empty fluorescence filterblock for B-1000 FL HBO
M-1165	Fluorescence filterset V (filterblock included) for B-1000 FL HBO
M-1166	Fluorescence filterset UV-DAPI (filterblock included) for B-1000 FL HBO
15104	OPTIKA lens cleaning kit
15008	OPTIKA immersion oil, 10ml













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## Headquarters and Manufacturing Facilities

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