Motic®

MORE THAN MICROSCOPY

IND

AE2000MET SERIES

INVERTED METALLURGICAL MICROSCOPE



CONTENTS **AE**2000**MET** CATALOGUE

INTRODUCTION	**02**
THE MECHANICS	04
THE OPTICS	06
THE ILLUMINATION	08
DOCUMENTATION	10
SPECIFICATIONS	12

With the new AE2000MET, Motic introduces an Inverted Metallurgical microscope dedicated to the inspection of bulky samples in automotive, machinery and steel industry. Large metal pieces or die casting parts, too large to be treated with an upright microscope model, can easily be examined to perform failure analysis, material research and quality control.

Motic's CCIS® optics, an advanced Infinity concept with maximum flexibility, provides new Brightfield/Darkfield objectives with Long Working distances for the inspection of massive opaque samples. High quality glasses and anti-reflex coating ensure superb image quality.

The robust 3-plate stage allows smooth scanning of the specimen.

A powerful 100W Halogen light source allows easy performance of Brightfield, Darkfield and POL contrast.

The complete AE2000MET microscope is manufactured in accordance with current RoHS standards. To protect the system from fungus growth in high-humidity environments, an anti-fungus treatment is applied to all parts of the microscope.

Your Motic Europe team



AE2000MET

INVERTED METALLURGICAL MICROSCOPE



THE MECHANICS

STAND & STAGE | EYEPIECE TUBES



INTRODUCTION
THE MECHANICS
THE OPTICS
THE ILLUMINATION
DOCUMENTATION
SPECIFICATIONS





ROBUST MANUFACTURING QUALITY FOR A LONG LIFETIME

Motic's AE2000MET incorporates maximum reliability in any aspect of its mechanics. The sturdy microscope stand follows all needs for a prolonged effortless operation. The ball-bearing 5-fold nosepiece for M32 objective thread guarantees proper parcentration and comfortable objective change.

The scratch resistant 3-plate stage has an extended surface area of 280x180mm, with a travel range of 50x50mm for safe and fast inspection purposes.

The eyepiece tube with 45° viewing angle and 48-75mm interpupillary distance guarantees relaxed viewing for hours. The extended "butterfly" movement increases the viewing height for individual positioning by 40mm. Light split with activated Trino port is 20/80.







THE OPTICS

OBJECTIVES | EYEPIECES



INTRODUCTION
THE MECHANICS
THE OPTICS
THE ILLUMINATION
DOCUMENTATION
SPECIFICATIONS

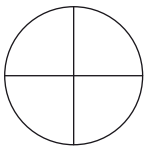


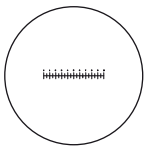


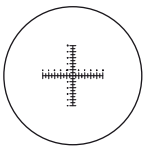
NEW BF/DF OBJECTIVES FOR METALLURGY

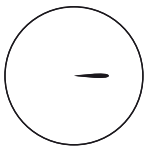
Motic's superb CCIS® Infinity concept has created a set of new BF/DF objectives, especially meant for metallurgical samples. Long working distances are verified throughout this class of LM Plan Achromats. Aberration-free images with improved field flatness and resolution are delivered by multi-layer coated glass lenses. All BF lenses from the BA310MET program can be used without parfocality restrictions by adapter rings.

The standard eyepieces N-WF 10X/20 with high eyepoint for eyeglass wearers provide consistent diopter adjustment for both eyes. All reticles from the BA series of Upright microscopes can be used.


Plain crosshair


Graduated linear hair
0.1mm/10mm


Graduated cross hair
0.1mm/10mm


Reticle with pointer





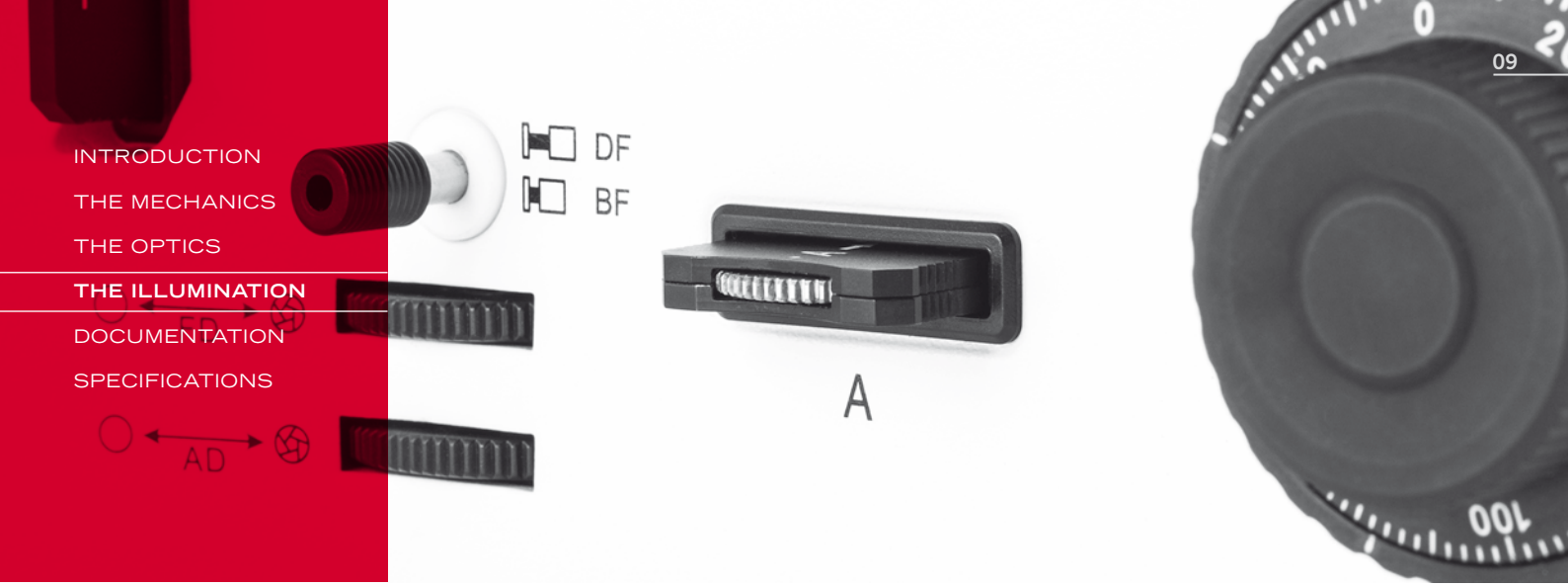


THE ILLUMINATION

LIGHT SOURCE | LIGHT MEMORY FUNCTION



INTRODUCTION
THE MECHANICS
THE OPTICS
THE ILLUMINATION
DOCUMENTATION
SPECIFICATIONS



SUFFICIENT POWER RESOURCES



The AE2000MET is equipped with a strong 12V/100W Halogen light source, delivering enough power to support the requirements of Darkfield and POL contrast.

As a safety precaution and for energy-saving purposes, Motic has implemented a “sleep mode” in the AE2000MET. An IR motion sensor detects the user in front of the microscope and automatically turns off the microscope when it is left for more than 15 minutes. By returning to the instrument, the power is reactivated.

Darkfield observation requires a high setting of illumination intensity. A switch from Darkfield to Brightfield may cause a dazzling to the human eye. To eliminate this risk, an eye protection mechanism has been implemented in the AE2000MET. This ergonomic feature automatically drives down the illumination intensity when changing from DF to BF and thus avoids a potential glare.

In addition to the standard package, the AE2000MET offers a set of polarizer & analyzer for simple POL contrast. The rotatable analyzer ensures the perfect setting of crossed POL filters.





DOCUMENTATION

STANDARD PHOTOMICROGRAPHY | DIGITAL DOCUMENTATION



INTRODUCTION
THE MECHANICS
THE OPTICS
THE ILLUMINATION
DOCUMENTATION
SPECIFICATIONS



A FLEXIBLE UPGRADE FOR DIGITAL RESULTS

Documentation of image results is a standard task in industrial quality control. The AE2000MET is accessible by the traditional photomicrography and the more flexible C-mount camera approach.

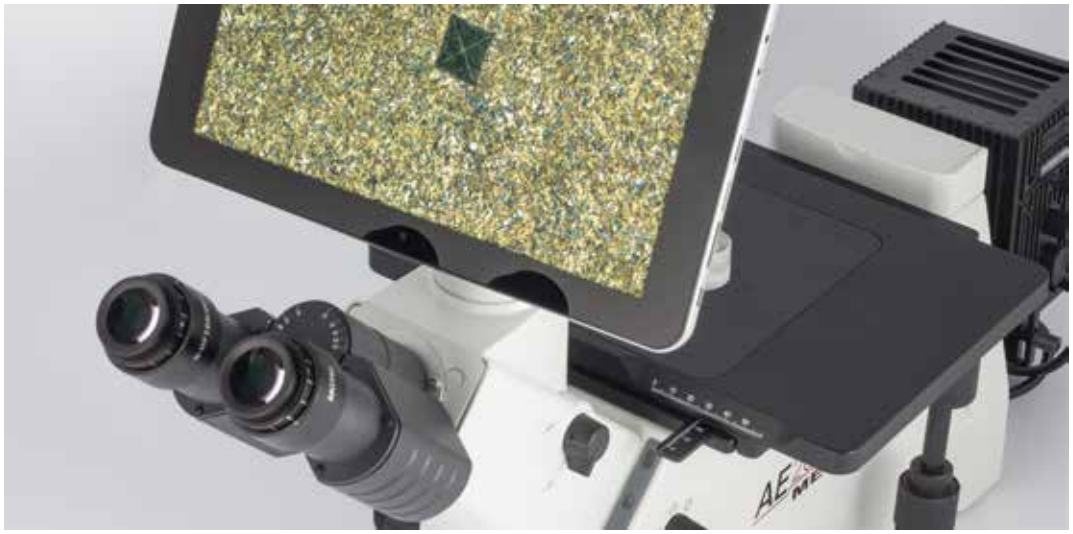
The Trinocular version of the AE2000MET is recommended for a convenient camera adaption. The adaptation of SLR camera consists of a mechanical adapter combined with a photo eyepiece (2.5X or 4X). The necessary T2 adapter specifically fits to the camera model and is supplied by photo specialist shops.

The Moticam series of digital C-mount cameras delivers excellent live images, ready for presentations and further storage. All Motic cameras come equipped with proprietary software to transform the AE2000MET into an analysis and documentation station.

For limited top landing bench, Moticam 580 is ideal for the presentation of High Resolution images on an HDMI screen without a computer. The wireless models Moticam X and X2 are dedicated to run under tablet and smartphone control through our “MotiConnect” App. Our tablet cameras with touch screen in first instance work as a fixed monitor solution, but may also create a hotspot for remote tablet/smartphone access.



MOTICAM TABLET SOLUTIONS



SPECIFICATIONS

AE2000MET
STANDARD CONFIGURATION
& OPTIONAL ACCESSORIES

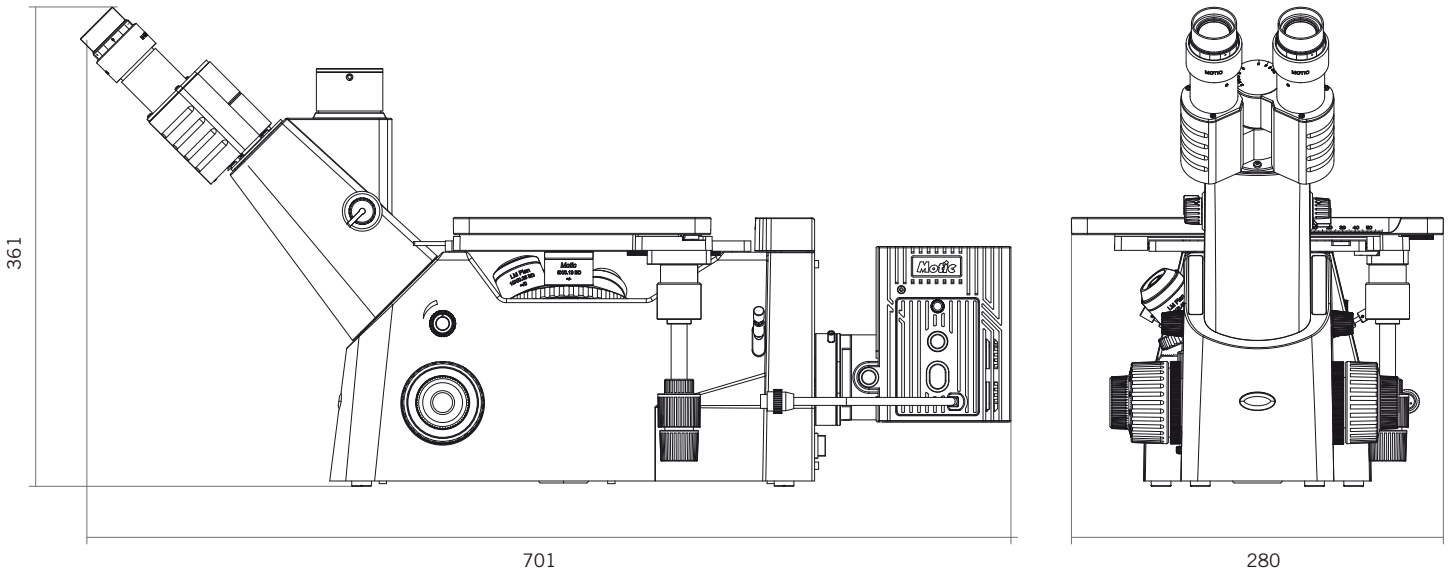




	General Specifications	Optional Configuration
Optical system	CCIS®	
Observation system	Swiveling 360° with 45° inclination	
Interpupilary distance (mm)	48-75	
Eyepieces	N-WF 10X/20	N-WF 12.5X/18; N-WF 15X/16
Eyepieces diopter adjustment	+/- 5 dpt	
Reticles (Ø25mm)		Crosshair 10mm/100 divisions Crossed double scale 10mm/100 divisions Pointer
Trino light split	20/80	
Nosepiece	Quintuple, side orientated	
Objective mounting thread RMS standard (W 4/5'' X 1/36'')	No; M32	RMS objectives per adapter ring
LM Plan Achromat objectives	LM BF/DF 5X/0.13; 10X/0.25; 20X/0.4; 50X/0.55	LM BF 5X/0.13; 10X/0.25; 20X/0.4; 50X/0.55; 100X/0.8; LM BF/DF 100X/0.8
3-plate x/y stage (mm)	280 x 180	
x/y Travel range	50 x 50	
Focus mechanism	Coaxial; tension adjustment	
Fine focus precision (µm)	2	
Z-axis movement of nosepiece (mm)	8	
Illumination	12V/100W Halogen	
Halogen / LED interchangeability	No	
Illumination position	External	
Auto ON/OFF	Yes	
BF/DF Light manager	Yes	
Transformer	12V/100W; external	
Power supply	110-240V (CE)	
Filters	Blue	Green, Didymium
Dimensions (mm)	701 x 280 x 361	
Weight (Kg)	13,9	
Contrast techniques		
Brightfield	Yes	
Darkfield	Yes	
POL contrast		Yes

SPECIFICATIONS

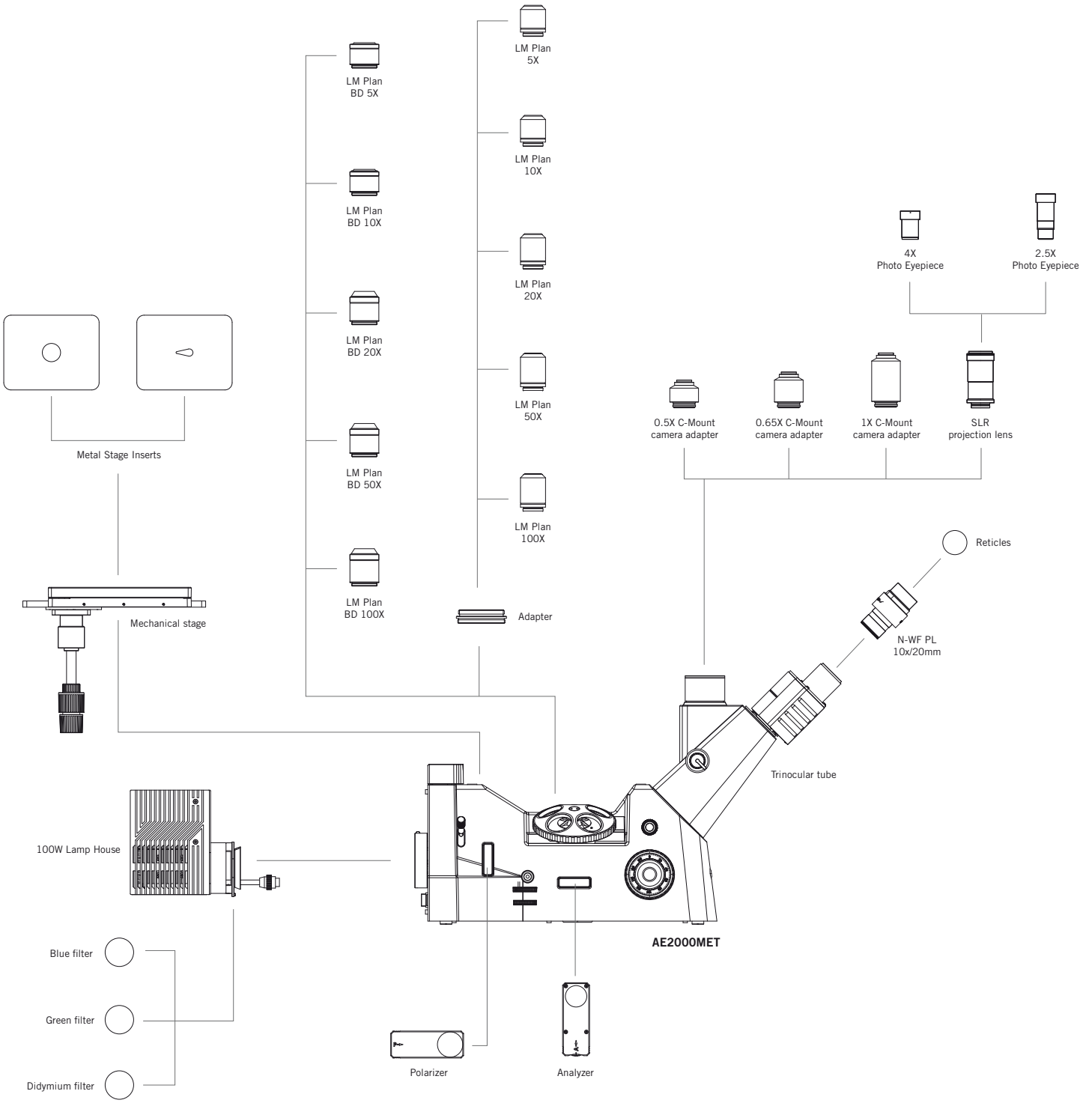
AE2000MET
SCHEMATIC DIAGRAMS (units: mm)





SPECIFICATIONS

AE2000MET
SYSTEM DIAGRAMS (units: mm)



HIGHLIGHTS

OPTICS | ILLUMINATION | MECHANICS



OPTICS

New Brightfield/Darkfield objectives
Especially meant for metallurgical samples and for the inspection of massive opaque samples. High quality glasses and anti-reflex coating ensure superb image quality.

ILLUMINATION

Powerful 100W Halogen light source
Easy performance of Brightfield, Darkfield and POL contrast.

IR sensor - Sleep mode
An IR motion sensor detects the user and automatically turns off the microscope when it is left for more than 15 minutes. By returning to the instrument, the power is reactivated.

Eye protection mechanism
This ergonomic feature automatically drives down the illumination intensity when changing from Darkfield to Brightfield and thus avoids a potential glare.

MECHANICS

Scratch resistant 3-plate stage
With an extended surface area of 280x180mm, and a travel range of 50x50mm for safe and fast inspection purposes.

Motic®

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Design Change: The manufacturer reserves the right to make changes in instrument design in accordance with scientific and mechanical progress, without notice and without obligation.

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