

Infinity Corrected Optical System

MT6000 Series

EPI-FLUORESCENT LABORATORY MICROSCOPES

Brightfield Phase Contrast





MT6000 Series

MT6000 Series Epi-Fluorescent Laboratory Microscopes

The Meiji Techno MT6000 Series Epi-Fluorescent Laboratory Microscopes have been designed as versatile, modular, ergonomic microscope systems which are ideally suited for use in research, or advanced laboratory applications. Ergonomic placement of controls allows for stress free operation, increased efficiency and maximum productivity.

The MT6000 Series offers superior fluorescent images with an emphasis on all newly engineered high performance optics based on Meiji Techno's ICOS Optical System (Infinity Corrected Optical System).

Features

- Super Widefield 10X High Eyepoint eyepieces, F.N.22 are standard.
- Available with comfortable Siedentopf type binocular or trinocular head.
- Tilting ergonomic binocular head—Adjustable vertically from 10°~50°.(Optional)
- New improved Semi Apo Plan infinity corrected objectives for fluorescent imaging.
- Modular six position epi-fluorescent illuminator with six blank positions for filter cubes.
- Basic blue, green and U excitation filter sets mounted in filter cubes included in all MT6000 models.
- Lamphouse for use with 100W Mercury arc lamps.
- 191mm x 128mm ceramic coated left or right-handed, flat top mechanical stage.
- Newly designed Abbe 1.25 N.A. condenser in quick change dovetail mount.
- 30 watt halogen illumination with automatic voltage sensing power supply for transmitted light use.
- New improved design, smooth operating, adjustable field iris.
- Brightfield, Darkfield, Phase Contrast and Polarized light modes available.

Size and Weight :

Footprint : 263 mm(D) x 176mm(W)

Weight & Overall Dimension :

Binocular head type 475 mm(D) x 477 mm(H) x 210 mm(W), 11.94kg

Trinocular head type 475 mm(D) x 532 mm(H) x 210 mm(W), 12.64kg

Power Supply : 260 mm(D) x 120mm(H) x 220mm(W), 3.04kg



MT6300

MT6000 Series

Viewing Heads

Units are supplied with either a standard Siedentopf type binocular or a Siedentopf type trinocular head. Both binocular and trinocular heads have the eyetubes inclined at 30° with the left eyetube having a graduated diopter adjustment. The interpupillary distance is adjustable between 53mm~75mm to accommodate a wide range of users. When the 80/20 beamsplitter of trinocular head is engaged for photo work, 80% of the image is directed to phototube and 20% to the eyetube

Optional Ergonomic Tilting Binocular Viewing Heads

Meiji Techno's MT6000 Series offers an optional tilting binocular ergonomic viewing head (MA975) which can be used in conjunction with a photo/video attachment with a sliding 80/20 beamsplitter. The tilting binocular head is adjustable from 10° to 50°.

The left eyetube has a graduated diopter adjustment. The interpupillary distance is adjustable from 53mm - 75mm. When the 80/20 beamsplitter is engaged for photo work, 80% of the image is directed to phototube and 20% to the eyetubes.

Objectives

Newly designed Semi Apo Plan F objectives have a high light transmission which extends into the ultra-violet excitation range. The result is an objective that provides an extremely bright, high contrast image, with UV transmission and impeccable color correction.

Stage

(Ceramic Coated, Low Profile, Right & Left Hand Stages)

All MT6000 models offer newly designed, double plate, ceramic coated stages, 191mm(W) x 128mm(D) with rounded corners and low positioned drop down ergonomic X-Y coaxial controls.

The easy to clean ceramic coating allows for a smooth exchange of specimens while offering maximum protection to the stage surface from abrasions and wear.

The super hard coating is durable and rugged enough to provide years of demanding use.

Condenser

The MT6000 Series employs an all new condenser design with quick-change dovetail mount which makes switching between condensers really fast and easy.

Ergonomically Placed Focusing Controls

The MT6000 Series Biological Microscopes have been designed with improved ergonomics which means operators can work without repetitive stresses.

Low positioned controls allow the operator to work with their forearms relaxed on the working surface so ergonomically placed controls are within easy reach.

Range of travel: 23mm, Rotation of fine focus: 0.2mm per revolution.

Improved Design Field Iris

Meiji Techno's MT6000 Models feature a newly designed field iris.

Unmounted 40mm filters can be quickly and easily placed directly into the filter tray above the aperture. The improved design iris control operates and tracks very smoothly and predictably facilitating accurate iris control with improved usability.



COMPONENTS AND ACCESSORIES FOR MT6000 SERIES FLUORESCENT MODELS

The items marked with an asterisk (*) are included in the Models MT6200 & MT6300

VIEWING HEAD (without eyepieces)

- MA815** Binocular head-Siedentopf type, I.P. adjustment 53mm to 75mm, graduated diopter on left eyetube (30.0mm I.D. eyetubes). Inclined at 30°. (Included in Model MT6200)
- MA816** Trinocular head (Siedentopf type), I.P. adjustment 53mm to 75mm graduated diopter on left eyetube (30.0mm I.D. eyetubes). Inclined at 30°. (Included in Model MT6300)
- MA975** Ergonomic head, inclination adjustable vertically from 10° to 50°, I.P. adjustment 53mm to 75mm graduated diopter on left eyetube (30.0mm I.D. eyetubes)

EYEPIECES WITH 30.0mm O.D. Eyetube

- MA817*** SWH10X, Widefield high eyepoint eyepiece, Field No. 22, Tube O.D. 30.0mm (each) (MA817 accepts optional 25mm diameter reticle)
- MA818** SWH15X, Widefield high eyepoint eyepiece, Field No. 16.0, Tube O.D. 30.0mm (each) (MA818 accepts optional 19mm diameter reticle)
- MA819** SWH20X, Widefield high eyepoint eyepiece, Field No. 12.0, Tube O.D. 30.0mm (each) (MA819 accepts optional 19mm diameter reticle)
- MA859** SWH10X-F Focusing eyepiece with 25mm reticle mount (without reticle), Tube O.D. 30.0mm (each)

MT-EPI-2 EPI FLUORESCENT ATTACHMENT SET FOR MT6000 SERIES COMPOSED OF:

- MT-FL*** Modular six position Epi-Fluorescent illuminator attachment includes Basic Blue, Green and U excitation filter sets cubed and 3 blank positions
- FL-LH*** Lamphouse for 100W Mercury lamp
- FL-PWJ*** D.C. Power supply for 100W Mercury lamp (for Main voltage 115V or 220/240V)
- BA005*** HBO 100W Mercury lamp (2200 Lumens, Life expectancy 200 hours)
- MA860*** ND25 Neutral density filter, 29.8mm diameter

MT-EPI-2 EPI FLUORESCENT OPTIONAL AND REPLACEMENT COMPONENTS

- BA005** HBO 100W Mercury lamp (2200 Lumens, Life expectancy 200 hours)
- MA865/05** Basic Blue excitation filter set mounted in cube (Included in Models MT6200 and MT6300)
- MA866/05** Basic Green excitation filter set mounted in cube (Included in Models MT6200 and MT6300)
- MA867/05** Basic U excitation filter set in cube (Included in Models MT6200 and MT6300)

NOTE: Excitation Filter 25mm diameter, Dichroic 25.7mm x 36mm, Emitter filter 25mm diameter

OBJECTIVES FOR FLUORESCENT MICROSCOPY

- MA844*** Semi Apoplan Objective F10X, N.A.0.40, W.D.1.0mm, F.N.24
- MA845*** Semi Apoplan Objective F20X, N.A.0.65, W.D.0.7mm, F.N.24
- MA846*** Semi Apoplan Objective F40X, N.A.0.82, W.D.0.15mm, F.N.24
- MA848*** Semi Apoplan Objective F100X, oil, N.A.1.25, W.D.0.2mm, F.N.24

PLANACHROMAT OBJECTIVES

- MA830** U Plan Objective 2.5X, N.A.0.07, W.D.5.7mm, F.N.24
- MA831** U Plan Objective 4X, N.A.0.10, W.D.25.9mm, F.N.24
- MA832** U Plan Objective 10X, N.A.0.25, W.D.10.7mm, F.N.24
- MA833** U Plan Objective 20X, N.A.0.40, W.D.1.6mm, F.N.24
- MA834** U Plan Objective 40X, N.A.0.65, W.D.0.5mm, F.N.24
- MA835** U Plan Objective 50X, N.A.0.87, W.D.0.28mm, F.N.24
- MA837** U Plan Objective 100X, oil, N.A.1.25, W.D.0.23mm, F.N.24



MT-EPI-2 EPI FLUORESCENT ATTACHMENT SET

Fluorescence Filter Information

Excitation Type	Excite Filter 25mm diameter	Dichroic Mirror 25.7mm X 38mm	Emitter Filter 25mm diameter	Applications
Blue Choma P/N 11001 v2	D470/40x	495DCLP	E515LP v2	FTTC Acridine Orange Auramine EGFP,S65T RSGFP
Green Choma P/N 11001 v2	D546/10x	565DCLP	E590LP v2	Rhodamine TRITC Propidium iodine RFP
Choma P/N 31000 v2	D360/40x	400DCLP	D460/50m	DAPI Hoechst AMCA



OBJECTIVES FOR FLUORESCENT MICROSCOPY



PLANACHROMAT OBJECTIVES



COMPONENTS AND ACCESSORIES FOR MT6000 SERIES FLUORESCENT MODELS

ZERNIKE PLANACHROMAT PHASE OBJECTIVES AND COMPONENTS

- MA839** U Plan Phase 10X Objective, N.A.0.25, W.D.10.7mm, F.N.24
- MA840** U Plan Phase 20X Objective, N.A.0.40, W.D.6.50mm, F.N.24
- MA841** U Plan Phase 40X Objective, N.A.0.65, W.D.0.5mm, F.N.24
- MA842** U Plan Phase 100X Objective, N.A.1.25, oil, W.D.0.23mm, F.N.24

ZERNIKE PHASE CONDENSER

- MA913** Zernike Phase condenser with centerable phase annuli for 10X, 20X, 40X, 100X with brightfield position, darkfield stop for 40X objective, (black-out position for epi-fluorescence on MT6000 Series only) with iris in dove tail mount

OTHER ZERNIKE COMPONENTS

- MA458/05** Centering Telescope, 30.0mm O.D.
- MA861/05** Green interference filter, 40.0mm diameter, unmounted

BRIGHTFIELD CONDENSER

- MA910** Abbe condenser, N.A.1.25 with iris diaphragm and filter tray, dovetail mount (Included in all Models)
- MA911** Achromatic condenser, N.A.1.25 with iris diaphragm in dovetail mount

DARKFIELD OIL IMMERSION OBJECTIVE/CONDENSER SYSTEM

- MA836** Plan Objective 50X, N.A.0.87, oil, with iris, W.D.0.28, F.N.24
- MA838** Plan Objective 100X, N.A.1.25, oil, with iris, W.D.0.23, F.N.24
- MA914** Darkfield condenser, N.A.1.25, dovetail mount

POLARIZERS

- MA915** Polarizer set for MT6000 Series microscopes

FILTERS

- MA858/05** ND25 Neutral density filter, 40.0mm diameter, unmounted
- MA856/05** LB100 Blue Clear filter 40mm diameter, unmounted
- MA857/05** Green filter, clear, 40.0mm diameter, unmounted
- MA861/05** Green interference filter, 40.0mm diameter, unmounted

STAGES

- MA918R** Ceramic coated flat-top stage, 78mm x 52mm, X-Y movement, with right hand drop-down coaxial controls.
- MA918L** Ceramic coated flat-top stage, 78mm x 52mm, X-Y movement, with left hand drop-down coaxial controls.
- MA676** Attachable clinical specimen holder for MA918R and MA918L

EYEPIECE MICROMETERS (25MM DIAMETER) FOR USE WITH MA817 SWH10X EYEPIECE)

- MA523** Cross-line reticle, 25mm diameter
- MA506** 10mm divided into 100 units, 25mm diameter
- MA509** 5mm divided into 100 units, 25mm diameter
- MA524** 10mm square into 400 parts, 0.5mm square, 25mm diameter
- MA510** 10mm square into 100 parts, 1.0mm square, 25mm diameter
- MA542** Cross-line with 0.1mm graduation, 25mm diameter

STAGE MICROMETERS

- MA285** 1mm divided into 100 units, 0.01mm
- MA286** 0.04" divided into 40 units, 0.001"

MISCELLANEOUS

- MA906** Eyeshield for MA817 SWH10X Eyepiece (ea) (Included in all models.)
- MA326** Spare bulb 6V 30W halogen lamp
- MA327** Spare Fuse 3A
- MA809/10** Removable AC Electric cord with UL plug for 115V models
- MA809/20** Removable AC Electric cord with European plug for 220V models
- MA809/30** Removable AC Electric cord with UK plug for 240V models
- MA714** Dust Cover for MT6000 Series



ZERNIKE PHASE CONTRAST SET



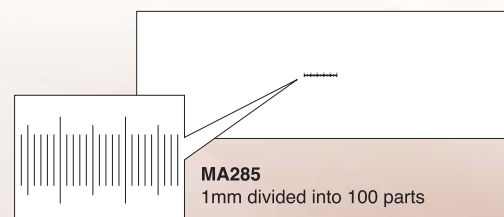
DARKFIELD CONDENSER AND OBJECTIVES WITH IRIS DIAPHRAGM



POLARIZER SET



MA523 MA506 MA509 MA542



MA285
1mm divided into 100 parts

CCD VIDEO & USB 2.0 DIGITAL CAMERAS

DK3000 3.0 megapixel, color digital video microscopy camera with high speed USB 2.0 interface, 1/2 format 6.5mm x 4.9mm image sensor with 2048 x 1536 resolution.



DK3000

CK3100N CCD Color TV camera. 1/3" CCD, 450 TV lines of resolution, NTSC system with DC12V adapter

CK3100P CCD Color TV camera. 1/3" CCD, 450 TV lines of resolution, PAL system with DC12V adapter

CK3900N CCD Color TV camera. 1/2" CCD, 450 TV lines of resolution, NTSC system with DC12V adapter

CK3900P CCD Color TV camera. 1/2" CCD, 450 TV lines of resolution, PAL system with DC12V adapter



CK3900

MA958 Photo/Video attachment with sliding 80/20 beam-splitter for attaching video or digital camera to MT Series when MA957 Ergonomic tilting head is used.

35mm PHOTOMICROSCOPY

Following three accessories are required for mounting a 35mm SLR camera body

1. The appropriate T-2 adapter ring for your SLR camera body:

- | | |
|----------------------|---|
| T2-1 Canon | T2-6 Olympus |
| T2-2 Minolta | T2-7 Contax, Yashika |
| T2-3 Pentax K | T2-8 Konica |
| T2-4 Pentax S | T2-9 Canon Eos |
| T2-5 Nikon | T2-10 Minolta Alpha / Maxim 2000 |

These adapter rings attach directly to your camera body's lens mount.

2. A photo eyepiece, available in the following magnifications:

- MA512** 2.5X magnification
MA500 3.3X magnification (with reticle mount)
MA508 5X magnification

The photo eyepiece performs the same function as a standard 35mm camera lens (i.e. focusing the image at the plane of the film).

3. One of two MA150 series camera attachments:

- MA150/50** Straight-tube camera attachment
MA150/60 Camera attachment with built-in focusing eyepiece

These attachments are used to mount the camera with T2 adapter ring to the photo tube.



MA150/60 Camera attachment



MA150/50 Camera attachment

MT6000 Series ORDERING INFORMATION

MODEL	BODY	OBJECTIVES	EYEPIECES	CONDENSER	ILLUMINATOR
MT6200	Binocular (Siedentopf)	Semi Apo F10X F20X F40X F100X oil	SWH 10X F.N. 22 (O.D. 30mm)	Abbe. N.A. 1.25	Epi-Fluorescent 100W Mercury & 30W transmitted Halogen, Koehler
MT6300	Trinocular (Siedentopf)				

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