Infinity Corrected Optical System

MT6100 PLM SERIES

ASBESTOS PLM (POLARIZING LIGHT MICROSCOPY) UPRIGHT COMPOUND MICROSCOPES

MT6120H

MEIJITECHNO

ASBESTOS POLARIZING SERIES

MT6100 SERIES

MEIJI TECHNO

ASBESTOS PLM POLARIZING MICROSCOPES

UPRIGHT COMPOUND MICROSCOPES WITH INFINITY CORRECTED OPTICAL SYSTEM

The MT6100 PLM Series is a precision polarizing light microscope system designed for reliable asbestos bulk fiber analysis, delivering strain-free optics, high contrast imaging, and laboratory-ready performance in full compliance with NIOSH 9002 methods.

The Meiji Techno MT6100 PLM Series microscopes are precision-engineered polarizing light microscopy systems designed for asbestos bulk fiber identification in accordance with NIOSH 9002 reference methods. Built on an infinity-corrected optical platform, these upright compound microscopes feature strain-free condensers, high-performance infinity-corrected objectives, and a centerable quadruple nosepiece to deliver exceptionally crisp, high-contrast imaging with superior color rendition and flat field views—ideal for rigorous laboratory, research, and educational applications. The ergonomic design places all controls intuitively for stress-free operation, enhancing productivity and comfort during extended analysis sessions.

Each MT6100 model includes critical polarization components—a rotatable polarizer in a swing-out mount, analyzer, integrated Bertrand lens, and a 10× dispersion staining objective—enabling detailed qualitative and semi-quantitative assessment of asbestos in bulk samples. The rotatable stage, with 360° graduation and vernier scale, combined with coaxial coarse and fine focusing, offers precise specimen control. Additional features such as built-in Koehler illumination with variable intensity control, automatic voltage sensing power supply, and included filters and compensating plates make the MT6100 Series a complete, laboratory-ready solution for demanding polarized light microscopy workflows.

MT6120H
(FRONTAL VIEW)

LED
OR **HALOGEN**
ILLUMINATION

AUTOMATIC VOLTAGE SENSING
POWER SUPPLY 110V-240V

POLARIZING LIGHT - QUADRUPLE NOSEPIECE (HALOGEN AND LED)

MODEL	BODY	ILLUMINATOR	EYEPIECES	OBJECTIVES	STAGE	CONDENSER
MT6120H	Binocular	TRANSMITTED KOEHLER ILLUMINATOR 6V, 30W HALOGEN	KHW-10X COMPENSATING FOCUSING WITH GUIDE PIN AND CROSSLINE RETICLE KHW 10X F.N. 20 (O.D. 23.2MM)	INFINITY CORRECTED SYSTEM F=200MM STRAIN FREE PLAN OBJECTIVE 10X 20X 40X DISPERSION STAINING 10X	ROTATABLE WITH 360° GRADUATION WITH VERNIER	STRAIN FREE ABBE CONDENSER N.A. 1.25, INCLUDES SLIDING MOUNT WITH ANNULUS
MT6130H	Trinocular					
MT6120L	Binocular	TRANSMITTED KOEHLER LED ILLUMINATOR				
MT6130L	Trinocular					

USED TO VISUALLY IDENTIFY AND CLASSIFY ASBESTOS FIBERS IN BUILDING MATERIALS USING POLARIZED LIGHT, ENSURING ACCURATE TESTING AND REGULATORY COMPLIANCE.

The MT6100 Series Asbestos PLM upright compound microscopes are designed with specialized optical and mechanical features that make asbestos identification accurate and reliable. Strain-free optics prevent optical distortion, while polarizers and analyzers allow fibers to be examined under polarized light. A rotatable stage helps align fibers correctly, dispersion staining objectives reveal unique color reactions, and Köhler illumination provides even, bright lighting—together enabling laboratories to confidently identify asbestos types and meet testing standards.

for FOR DETAILED IMAGING OF CRYSTALLINE AND ANISOTROPIC SPECIMENS.

VIEWING HEAD
Binocular 30° inclined tube or or Trinocular Viewing Head 30° inclined

ATTACHABLE **DIGITAL CAMERA** 23.2mm PHOTO PORT

FOCUSING EYEPIECE
MA407CP

Super Widefield compensating KHW10X, focusing eyepiece with a cross-line reticle and guide pin

EYEPIECE
KHW-10X Compensating eyepiece, F.N. 20 (Tube O.D. 23.2mm)

BEAM SPLITTER
Beam splitter 80/20 split ratio, 80% light is directed to the camera and the remaining light 20% going to the eyepieces

BERTRAND LENS
Intermediate tube with built-in Bertrand lens analyzer and rotatable polarizer in a swing-out mount

COMPENSATOR SLOT
Holds optical plates to enhance polarization contrast

NEW MODULAR DESIGN facilitates ATTACHMENT OF A VARIETY **OF ACCESSORIES**

STRAIN FREE OBJECTIVES
Reverse facing centerable nosepiece with Infinity Corrected Plan 4X, 10X, 40X, 180mm tube length

STAGE
Ceramic coated, 175mm diameter, ball bearing, circular rotating stage graduated 360°and stage clips

SUBSTAGE COARSE KNOB

STRAIN FREE CONDENSER
Strain free Abbe condenser, N.A. 1.25 with iris diaphragm and dovetail mount

FOCUSING ADJUSTMENT
Coaxial coarse and 200 μm fine adjustments, 2 μm precision, Friction adjustment. “Slip-clutch” system protects against over-focusing

SWING IN & OUT POLARIZER ANALYZER
Swing in/out mount provides both orthoscopic and conoscopic observations

LED OR HALOGEN ILLUMINATOR
Paired HWF 10X//20mm F.O.V. 30.0mm with diopter adjustment

FIELD DIAPHRAGM
Improves contrast by blocking excess light.

MT6130L

ILLUMINATION ADJUSTMENT
Variable Intesity knob increases or decreases the intensity of the light source.

ON/OFF SWITCH
Main power control for the light source

NOSEPIECE CENTERING SCREWS (PAIR)

BLUE CLEAR DAYLIGHT FILTER

HDMI-USB 2.0 CAMERAS WITH 11.8" MONITOR

Requires 0.3 "C"-Mount Adapter Model MA151/35/03

HD1000-LITE-M	Affordable Color HD 5MP CMOS 15FPS/ HDMI/ USB 2.0 Camera/Annotation & Measurement Software with 11.8IN HDMI monitor.
HD1500T-M	Color HD 6MP CMOS 60FPS/ HDMI/ USB 2.0 Camera/Annotation & Metric Measurement Software with 11.8IN HDMI monitor.
HD1500MET-M	Color HD 6MP CMOS 60FPS/ HDMI/ USB 2.0 Camera/Annotation & Metric Measurement Software with 11.8IN HDMI monitor.
HD1500MET-AF-M	Autofocus HD 6MP CMOS 60FPS/ HDMI/ USB 2.0 Camera/Annotation & Metric Measurement Software with 11.8IN HDMI monitor.

HD1500MET-AF CAMERA

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.

MT6130H + HD1500-M + MA151/35/03

11.8IN HDMI MONITOR

EQUIPPED WITH USB 2.0, SD CARD

MA151/35/03 "C" MOUNT ADAPTER

COMPONENTS AND ACCESSORIES FOR MT6100 SERIES

The Items marked with a Star (★) are included

VIEWING HEAD (without eyepieces)

MA952 ★Binocular head - Siedentopf type, inclined at 30° with reticle angle compensation, I.P. adjustment 53mm to 75mm, graduated diopter on left eyetube. (23.2mm I.D. eyetube). (Included in models MT9200 and MT9200L)

MA953 ★Trinocular head - Siedentopf type, inclined at 30° with reticle angle compensation, I.P. adjustment 53mm to 75mm, graduated diopter on left eyetube (23.2mm I.D. eyetube). (Included in models MT9300 and MT9300L)

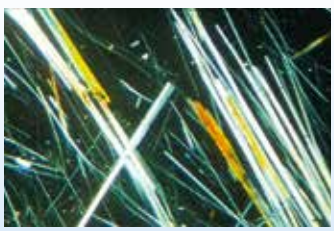
EYEPIECES

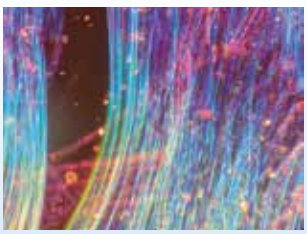
MA407CP ★Super Widefield Compensating KHW10X, focusing eyepiece with crossline and guide pin, F.N. 20 are standard with 21mm reticle mount (Tube O.D. 23.2mm)

MA407 ★KHW-10X Compensating eyepiece, F.N. 20 (each) (Tube O.D. 23.2mm) (Included)

MA407/05 KHW-10X Compensating Focusing eyepiece, F.N. 20 (each) (Tube O.D. 23.2mm)

MA200 Eyeshields for MA407 KHW10X eyepiece (each)





PLM ASBESTOS DISPERSION STAINING SAMPLES

The MT6100 Asbestos PLM (Polarizing Light Microscopy) upright compound microscopes series , compliant with the NIOSH 9002 reference method, are used to identify and characterize asbestos fibers in bulk building materials. It allows laboratories to determine asbestos presence and fiber type by analyzing optical properties under polarized light. This method is widely used for environmental testing, regulatory compliance, and safety assessments prior to renovation or demolition projects.

COMPONENTS AND ACCESSORIES FOR MT6100 SERIES

The Items marked with a Star (★) are included

SEMI PLANACHROMAT POL OBJECTIVES FOR TRANSMITTED LIGHT WORK

MA935 Strain free Plan objective 4X/N.A.0.10, W.D. 25.89mm (Optional)

MA936 ★Strain free Plan objective 10X/N.A.0.25, W.D. 7.3mm (Included)

MA936D ★Dispersion Staining objective 10X/N.A. 0.25, W.D. 10.6mm, D.S Annular halo design or MA936DC Central stop design. (Included)

MA937 ★Strain free Plan objective 20X/N.A. 0.40, W.D. 7.29mm (Included)

MA937D Dispersion Staining objective 20X/N.A. 0.40, W.D. 7.29mm, D.S. (Optional)

MA938 ★Strain free Plan objective 40XS/N.A. 0.65, W.D. 0.50mm (Included)

MA938D Dispersion Staining objective 40XS/N.A. 0.75, W.D. 0.50mm, D.S.(Optional)

MA939 Strain free Plan objective 60XS/N.A. 0.85, W.D. 0.2mm (Optional)

MA940 Strain free Plan objective 100XS/N.A. 1.25 oil, W.D. 0.14mm (Optional)

CONDENSER & CENTERING TELESCOPE

MA954/05 ★Strain free Abbe condenser N.A. 1.25, includes sliding mount with annulus for 10X, 20X, 40X phase or dispersion staining objectives, iris diaphragm, dovetail mount (Included)

MA458 ★Focusing Centering Telescope, 23.2mm O.D. (Included)

STAGE AND STAGE ACCESSORIES

MA299 Attachable mechanical stage for MT9000 Series (Optional)

MA946 ★Stage Clips (2 pcs) (Included)

WAVE PLATES AND COMPENSATORS

MA470/05 ★First order red compensating plate, 530nm for MT6100 Series (20mm x 6mm x 80mm) (Included)

MA471/05 ★Analyzer (Sliding type) for MT6100 Series (26mm x 6mm x 80mm) (Included)

MA477/05 Bertrand lens (Sliding type) for MT6100 Series (Built-in to frame) (Included)

FILTERS

MA289/05 ★Blue clear filter, 29.8mm diameter, unmounted, for transmitted light (Included)

POWER CORDS

MA809/10 ★Removable AC Electric cord with plug for 115V models (Included in all 115V models)

MA809/20 ★Removable AC Electric cord with plug for 220V models (Included in all 220V models)

REPLACEMENT BULBS & FUSES

MA326 ★Spare bulb, 6V 30W Halogen

MA327 ★Spare 3A fuse

STORAGE

MT-PEL Pelican case with foam insert 21 ½ (L) x 16 ½ (W) x 12 ½ (D) for ML/MT/EM models with portable pullout handle and wheels for protection against vibration and shock (Optional)

MISCELLANEOUS

MA701 ★Dust cover for MT6100 Series (Included in all series)

MA701AS Anti-static and washable dust cover for MT4000, MT5000, MT7000, MT6100, MT6500, MT-50, MT-60, 22" x 21" size, blue color (Optional)

MA905 Interference Color Chart (Optional)

All MT6100 Series models are supplied with a centerable quadruple nosepiece, 175mm diameter, ceramic coated, rotatable stage with vernier and 360° graduation, First order Red Plate, Strain free Plan 10X, 20X, 40X Pol objectives, 10X Dispersion Staining objective, blue clear daylight filter, dustcover and operations manual.

MA299 MECHANICAL STAGE (OPTIONAL)

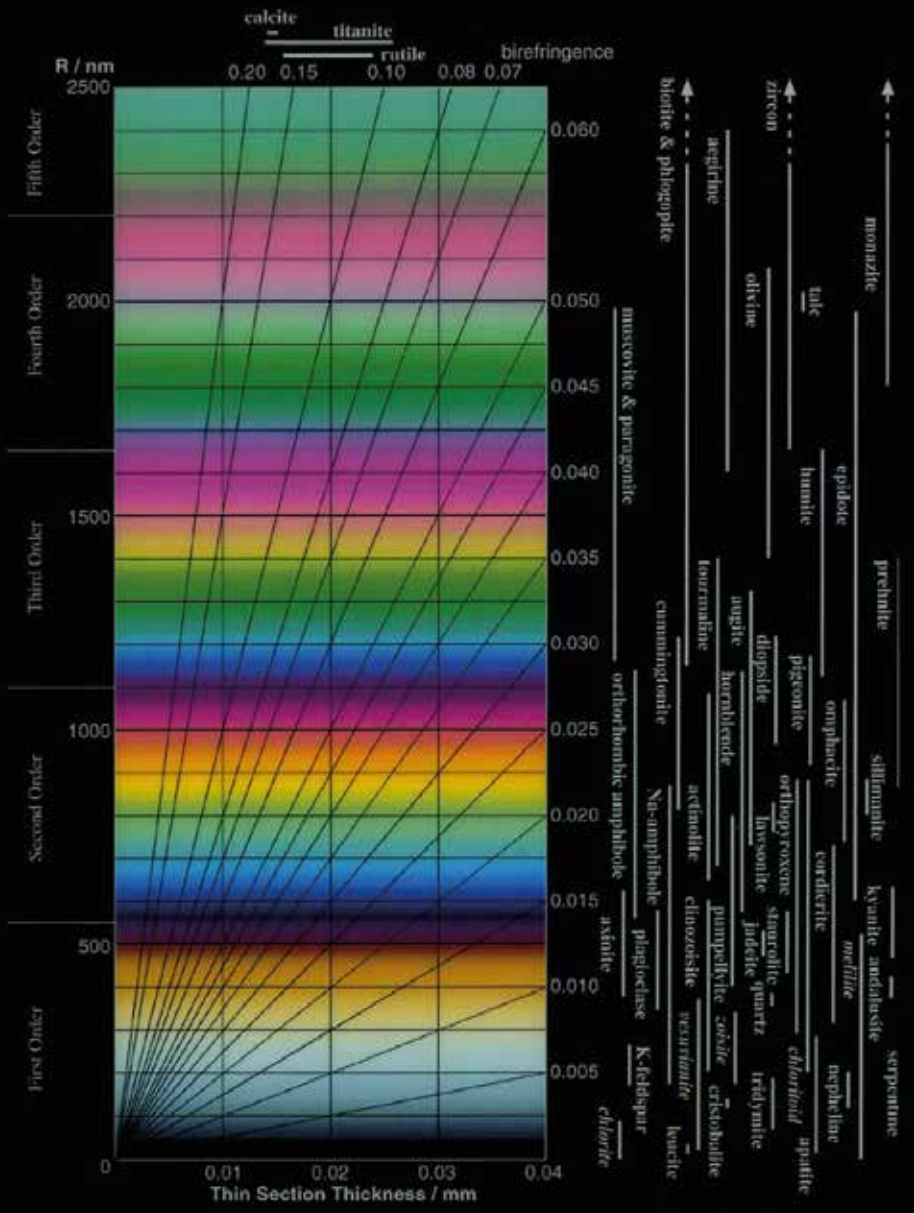
MA458 FOCUSING CENTERING TELESCOPE, 23.2MM O.D. (INCLUDED)

MA945 100XS/N.A. 1.25 OIL, W.D. 0.14MM OBJECTIVES (OPTIONAL)

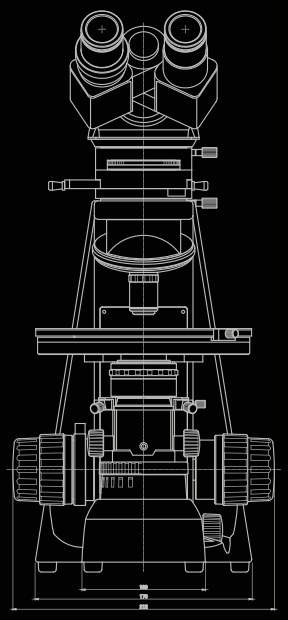
MA289/05 BLUE CLEAR FILTER 29.8MM DIAMETER UNMOUNTED FOR TRANSMITTED LIGHT (INCLUDED)

MT-PEL PELICAN CASE WITH FOAM INSERT 21 ½ (L) X 16 ½ (W) X 12 ½ (D) (OPTIONAL)

INTERFERENCE COLOR CHART



For further information about the MT6100 Series, scan this QR code.



Product Information:

- ***Manufactured:*** *100% MADE IN JAPAN*
- ***Warranty:*** *LIMITED LIFETIME WARRANTY*
- ***Customer Support:*** *1-(800) 832-0060 (U.S.A Based)*

Package Information:

- ***Weight:*** *29 lbs (8.00 kg)*
- ***Box Size:*** *16 x 14 x 21 inches*
- ***Footprint:*** *263mm (D) x 176mm (W)*

- ***Binocular head type:***

263 mm(D) x 456mm (H) x 212mm(W) (9.06kg)(33.0 lbs.)

- ***Trinocular head type:***

263 mm(D) x 510mm(H) x 212mm(W) (9.75Kg)(35.0 lbs.)

Specifications and design subject to change without notice for improvements

Agent:

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