Infinity Corrected Optical System

POLARIZING MICROSCOPES

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80

Incident and Transmitted Light models

MT



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MT9920





MT9900 Series Polarizing Microscopes Infinity corrected optical systems for transmitted and Incident light use.

Meiji Techno's MT9900 Series of Polarizing Microscopes are versatile, modular, ergonomic micro-scope systems designed for student, advanced educational or routine laboratory use. The MT9900 Series features all new Strain Free Infinity Corrected Optics, large ceramic coated rotatable stages with greater wear resistance, and a newly engineered ergonomically designed frame that is rugged, stable, yet flexible with a slim compact footprint that fits nicely in your workspace. A perfect instrument for Geology and Petrology applications.

Features Eyepieces:

One KHW10X Focusing eyepiece with cross-line and guide pin, FN20 and one KHW10X eyepiece, FN 20.

Viewing Head:

The MT9900 Series Polarizing Microscope is equipped with either Siedentopf type binocular or Siedentopf type Trinocular viewing head, inclined at 30°, with reticle angle adjustment system. Optional tilting ergonomic binocular head - adjustable vertically from 10° to 50° available.

Nosepiece:

Reverse Facing, quadruple, ball bearing nosepiece with one fixed and three centerable objective positions. Two objective centering tools are included.

Objectives:

Strain Free Plan POL Objectives for **Transmitted Light Work** Plan 4X/N.A.0.10, W.D. 15.3mm Plan 10X/N.A.0.25, W.D. 7.3mm Plan 20X/N.A.0.40, W.D. 5.0mm (Optional) Plan 40XS/N.A.0.65, W.D. 0.72mm Plan 60XS/N.A.0.85, W.D. 0.72mm (Optional) Plan 100XS/N.A. 1.25, W.D. 0.14mm (Optional) Strain Free Plan POL Objectives for **Incident Light Work** Plan 4X/N.A.0.10, W.D. 15.3mm (Optional) Plan 10X/N.A.0.25, W.D. 7.3mm (Optional) Plan 20X, N.A.040, W.D. 5.2mm (Optional) Plan 40X, N.A.0.65, W.D.0.81mm (Optional)

Intermediate Tube:

Orthoscopic / Conoscopic intermediate tube with a rotatable analyzer, focusable and centerable Bertrand lens and a compensator slot to accept test plates. (Compensator slot accepts a Slider for 1st Order Red plate and 1/4 wave plate, or optional Quartz Wedge and Senarmont compensator) Compensators (Test Plate):

Three position test plate with one 1st Order Red Plate (Gypsum, first order red, sensitive tine 530nm) and, one 1/4 wavelength retardation plate (Mica 147.3nm) and with one empty position. **Polarizer:**

Rotatable polarizer in swing-out mount with detent at 0° and 90°. Rotatable analyzer

Stage:

175mm diameter, ball bearing, circular rotating stage. Graduated 360°, with 1° increments and Vernier reading to 0.1°. Includes 2 stage clips. (Optional attachable mechanical and point counting stages are available.)

Condenser:

Strain-free Abbe condenser, N.A. 1.25 with swing out top lens, iris diaphragm in dovetail mount. Mounted in a center-able condenser holder with a rack and pinion adjustment. **Illuminator:**

Built-in **transmitted Koehler illuminator** with continuously variable intensity control and 6V 30W halogen lamp. Automatic voltage (100V to 240V) sensing power supply and variable rheostat control are built into the microscope base.

Vertical illuminator with full Koehler design equipped with 6V 30W Halogen light source, field iris, aperture iris and filter slots. With a separately cased automatic voltage (100 to 240V) sensing power supply and variable rheostat control.

Filter:

29.8mm diameter daylight-type blue filter for correct color rendition.

Focusing Controls:

Ergonomically low positioned coaxial coarse and fine focusing controls. Coaxial fine focus knob: 0.2mm per rotation; Coarse: 26mm per rotation; Minimum reading 2 microns on right side knob. Size and Weight:

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

MT9920 : 212mm (W) x 297mm (D) x 504mm (H), 11.4Kg

MT9930 : 212mm (W) x 297mm (D) x 558mm (H), 12.2Kg

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The picture shows Model MT9930 with an optional digital camera and a mechanical stage mounted. Separately cased transformer for vertical illumination is not shown but it is supplied always.

COMPONENTS AND ACCESSORIES AVAILABLE FOR THE MT9900 Series

VIEWING HEAD

MA952	Binocular head - Siedentopf type, inclined at 30 degrees with reticle angle compensation, I.P. adjustment 53mm to 75mm, graduated diopter on left evetube. (23.2mm I.D. evetube).
	(Included in model MT9920)
MA953	Trinocular head - Siedentopf type, inclined at 30 degrees with reticle
	angle compensation, I.P. adjustment 53mm to 75mm, graduated
	diopter on left eyetube. (23.2mm I.D. eyetube).
	(Included in model MT9930)

EYEPIECES

MA407CP	KHW-10X Focusing eyepiece with cross-line and guide pin (each)
	(21mm reticle mount) (Tube O.D.23.2mm)
MA407	KHW-10X Compensating eyepiece, F.N.20 (each)
	(Tube O.D.23.2mm)
MA407/05	KHW-10X Compensating Focusing eyepiece, F.N.20 (each)
	(Tube O.D.23.2mm)

PLANACHROMAT POL OBJECTIVES FOR TRANSMITTED LIGHT WORK

MA935	Strain free Plan objective 4X/N.A.0.10, W.D. 15.3mm
MA936	Strain free Plan objective 10X/N.A.0.25, W.D. 7.3mm
MA937	Strain free Plan objective 20X/N.A.0.40, W.D. 5.0mm
MA938	Strain free Plan objective 40XS/N.A.0.65, W.D. 0.72mm
MA939	Strain free Plan objective 60XS/N.A.0.85, W.D. 0.2mm
MA940	Strain free Plan objective 100XS/N.A.1.25 oil, W.D. 0.14mm

PLANACHROMAT POL OBJECTIVES FOR INCIDENT

LIGHT WORK

MA935	Strain free Plan objective 4X/N.A.0.10, W.D. 15.3mm
MA936	Strain free Plan objective 10X/N.A.0.25, W.D. 7.3mm
MA947	Strain free Plan objective 20X/N.A. 0.40, W.D. 5.2mm
MA948	Strain free Plan objective 40XS/N.A. 0.65, W.D. 0.81mm

CONDENSER

MA976/05 Strain free Abbe condenser, N.A. 1.25 with swing out top lens, iris diaphragm and filter tray in dove tail mount

STAGE AND STAGE ACCESSORIES

- MA299
 Attachable mechanical stage for MT9900 Series, 25mm X 25mm movement.

 MA945
 Attachable mechanical stage for MT9900 Series with Point Counter.
- Interchangeable point counting knobs with intervals of 0.1mm, 0.2mm, 0.5mm and 1mm. 25mm X 25mm movement. MA946 Stage Clips (2 pcs)

WAVE PLATES AND COMPENSATORS

MA988	Slider for 1/4 Wave-length test plate and first order red
	compensating plate (with one open position) for MT9900 Series
	(20mm x 6mm x 142mm)
MA654/10	Quartz Wedge, 6 order, graduated for MT9900 Series
	(20mm x 6mm x 150mm)
MA904/10	Senarmont compensator (A highly accurate 1/4 wave plate used to
	measure retardation)
MA956/05	Rotatable analyzer
COMPONE	NTS FOR REFLECTED LIGHT MICROSCOPY
MA955	Vertical illuminator attachment, 6V 30W Halogen Koehler
MA927/05	Vertical illuminator table-top transformer in case
	(Input voltage 100V-240V)
MA679	Polarizer in mount
MA475/05	Blue clear filter in mount
MA198	ND8 Neutral density filter in mount
MISCELLAN	NEOUS
MA289/05	Clear blue filter Ø29.8mm
MA200	Eyeshield for MA407 KHW10X Eyepiece
MA326	Spare halogen bulb 6V 30W
MA327	Spare fuse 3A
MA711	Dust cover
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

 MA905
 Interference Color Chart





MA299 Mechanical stage

MA945 Point counter



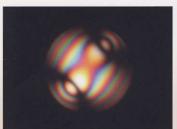
Gabbro Reflected light



Pyroxene andesite



Piemontite schist



Biaxial Interference figure Aragonite

DIGITAL 35mm SLR CAMERAS

Following three accessories are required for 35mm SLR camera photomicrography

1. Camera Attachment

MA150/50 Camera attachment to fit to photo tube of trinocular models

MA150/60 Camera attachment as above, but with eyepiece finder

2. Photo Eyepiece

- **MA512** Photo eyepiece 2.5X (Magnifies objective power by 2.5X at the film plane)
- **MA508** Photo eyepiece 5X (Magnifies objective power by 5X at the film plane)
- Photo eyepiece 3.3X (Magnifies objective power by 3.3X at the film plane, with reticle mount) **MA500**

3. T-2 Adapter Ring

- T2-1 Adapter ring for CANON camera
- T2-2 Adapter ring for MINOLTA camera
- T2-3 Adapter ring for PENTAX K, RICOH-XR camera
- T2-4 Adapter ring for PENTAX S camera
- Adapter ring for NIKON camera T2-5
- T2-7 Adapter ring for CONTAX, YASHIKA camera
- T2-8 Adapter ring for KONICA camera
- T2-9 Adapter ring for CANON EOS camera
- T2-10 Adapter ring for MINOLTA α, MAXIM 2000 camera

DIGITAL CAMERA ADAPTERS

- MA151/30/73 Digital camera adapter for use with Canon Powershot A610, A620, A630, A640, etc.
- MA151/30/58 Digital camera adapter for use with Nikon Coolpix P5000, P5100, etc.
- MA151/30/63 Digital camera adapter for use with Olympus Camedia C-750, C-755, C-760, SP500-UZ, etc.

CCD VIDEO & USB 2.0 DIGITAL CAMERAS

- 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
- DK3000 3.1 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.

MT9900 Series ORDERING INFORMATION

490

263 Footprint: 263mm (D) x 176mm (W) MT9920 : 212mm (W) x 297mm (D) x 504mm (H), 11.4Kg MT9930 : 212mm (W) x 297mm (D) x 558mm (H), 12.2Kg

MODEL	BODY	OBJECTIVES	EYEPIECES	STAGE	CONDENSER	ILLUMINATOR
MT9920	Binocular (Siedentopf)	Plan 10X	(1) KHW10XCP Focusing with guide pin and crossline reticle (1) KHW10X F.N.20 (O.D. 23.2mm)	Rotatable with 360° graduation with vernier	Strain Free Abbe N.A.1.25 Swing out top lens	Transmitted light Koehler 6V 30W Halogen and Incident light Koehler 6V 30W Halogen
MT9930	Trinocular (Siedentopf)					

Agent :



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CK3900

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DK3000

Specifications and design subject to change without notice for improvements.







MA150/50 Camera attachment 255

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