

Infinity Corrected Optical System

MT7000 Series

METALLURGICAL MICROSCOPES

For Reflected Light Observation

Newly designed Plan EPI Optics provide bright, crisp images with color rendition and superior flat field of view.



MT7000



MT7000 Series

MT7000 Series METALLURGICAL MICROSCOPES For Reflected Light Observation

A versatile, modular, ergonomic metallurgical microscope system. Newly designed Epi-Plan Optics provides exceptionally bright, crisp images with good color rendition and superior flat field of view.

Features

Eyepieces:

Super Widefield 10X, High Eyepoint Eyepieces, F.N. 22 are standard.

Viewing head:

The MT7000 Series Metallurgical microscopes is equipped with either Siedentopf type binocular or Siedentopf type trinocular viewing head Inclined at 30° and rotatable through 360° for comfortable viewing. Optional tilting ergonomic binocular head—Adjustable vertically from 10°~50° is available.

Nosepiece:

Smooth Operating Ergonomic Quintuple Nosepiece.

Objectives:

Infinity corrected, Planachromat EPI Objectives, Plan EPI 5X/0.10, W.D. 20.0mm, Plan EPI 10X/0.25, W.D. 7.48mm, Plan EPI 20X/0.40, W.D. 5.20mm, Plan EPI 50X/0.75, W.D. 0.38mm.

Stage:

Ceramic coated, flat-top stage, 191mm x 126mm with 100mm x 100mm travel. Equipped with precision ball bearing guides and low positioned drop down coaxial controls for X-Y movement.

Illuminator:

Vertical illuminator with full Koehler design equipped with 6V 30W Halogen light source, field iris, aperture iris and filter slots. Capable of brightfield or simple reflected polarization technique. Includes blue clear, Green clear, Neutral density (ND 50) filters in mounts. Automatic voltage (100V ~ 240V) sensing power supply and variable rheostat control are built in the microscope base.

Focusing Controls:

Ergonomically low positioned focusing controls allow the operator to work their forearms relaxed on the working surface. Range of travel is 23mm.

Rotation of fine focus is 0.2mm per revolution.

Size and weight:

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

Weight & Overall Dimension :

Binocular head type 424.5 mm(D) x 471 mm(H) x 210 mm(W), 8.5kg

Trinocular head type 424.5 mm(D) x 526 mm(H) x 210 mm(W), 9.2kg



MT7100

COMPONENTS AND ACCESSORIES FOR MT7000 Series

The items marked with an asterisk (*) are included in the Model MT7000 & MT7100.



VIEWING HEAD

- 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 MT7000)
- 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 MT7100).
- MA957** Ergonomic tilting binocular head (Siedentopf type), adjustable from 10° to 50°, I.P. adjustment 53mm to 75mm, graduated diopter on left eyetube (30.0mm I.D. eyetubes)

EYEPIECES (30.0mm O.D. Eyetube)

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

PLAN EPI OBJECTIVES

- MA870*** Plan Epi Objective 5X, NA 0.10, W.D. 20.0mm, F.N.24
- MA871*** Plan Epi Objective 10X, NA 0.25, W.D. 7.48mm, F.N.24
- MA872*** Plan Epi Objective 20X, NA 0.40, W.D. 5.20mm, F.N.24
- MA873*** Plan Epi Objective 50X, N.A.0.75, W.D. 0.38mm, F.N.24
- MA874** Plan Epi Objective 100X, N.A.0.90, W.D. 0.37mm, F.N.24

LWD PLAN EPI OBJECTIVES (LONG WORKING DISTANCE)

- MA920** LWD Plan Epi Objective 20X, N.A. 0.40, W.D. 11.0mm, F.N.24
- MA921** LWD Plan Epi Objective 50X, N.A. 0.55, W.D. 7.5mm, F.N.24

ILLUMINATOR

- MA927*** Vertical Koehler illuminator, 6V 30W Halogen lamp, with clear blue, clear green, ND50 Neutral density filter and polarizing filters in metal mount. (transformer is built in microscope stand.)

FILTERS

- MA475/05*** Blue clear filter, 20mm diameter in metal mount
- MA476*** Green clear filter, 20mm diameter in metal mount
- MA774*** ND50 Neutral density filter, 20mm diameter in metal mount
- MA497*** Polarizing filter 20mm diameter in metal mount

STAGE

- MA941*** Ceramic coated flat-top stage, 191mm X 126mm, 100mm X 100mm, X-Y movement with right hand drop-down controls.

EYEPIECE MICROMETERS

(25mm diameter for use with MA817 or MA859 eyepieces)

- MA523** Eyepiece micrometer, Cross-line reticle, 25mm diameter
- MA506** Eyepiece micrometer, 10mm divided into 100 units, 25mm diameter
- MA509** Eyepiece micrometer, 5mm divided into 100 units, 25mm diameter
- MA510** Eyepiece micrometer, 10mm square into 100 parts, 1.0mm square, 25mm diameter
- MA542** Eyepiece micrometer, Cross-line reticle with 0.1mm graduations, 25mm diameter
- MA738** Eyepiece micrometer for grain sizing in steel, 25mm diameter

EYEPIECE MICROMETERS

(19mm diameter for use with MA818 or MA819 eyepieces)

- MA279** Eyepiece micrometer, Cross-line reticle, 19mm diameter
- MA280** Eyepiece micrometer, 10mm divided into 100 units, 19mm diameter
- MA281** Eyepiece micrometer, 5mm divided into 100 units, 19mm diameter
- MA283** Eyepiece micrometer, 10mm square into 100 parts, 1.0mm square, 19mm diameter
- MA539** Eyepiece micrometer, Cross-line reticle with 0.1mm graduations, 19mm diameter

STAGE MICROMETER

- MA292** Metal stage micrometer, 0.01mm, for reflected light

MISCELLANEOUS

- MA906*** Eyeshield for MA817 SWH10X Eyepiece (each)
- MA326** Spare bulb 6V 30W halogen
- 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
- MA701** Dust cover for MT7000 & MT7100



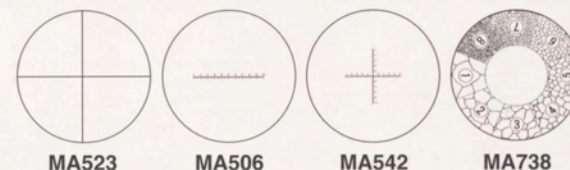
MA957 ERGONOMIC TILTING BINOCULAR HEAD (SIEDENTOPF TYPE)



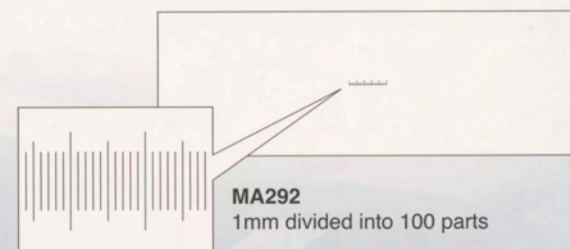
PLAN EPI OBJECTIVES



LWD (LONG WORKING DISTANCE) PLAN EPI OBJECTIVES



MA523 MA506 MA542 MA738



MA292
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.



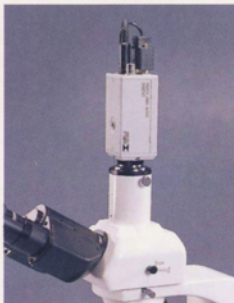
DK3000

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

MT7000 Series ORDERING INFORMATION

MODEL	BODY	OBJECTIVES	EYEPIECES	POWER SUPPLY	ILLUMINATOR
MT7000	Binocular (Siedentopf)	Plan Epi 5X Plan Epi 10X Plan Epi 20X Plan Epi 50X	SWH10X F.N. 22 (O.D. 30mm)	Automatic Voltage Sensing Power Supply	Vertical Koehler 6V 30W Halogen Power Supply
MT7100	Trinocular (Siedentopf)				

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