



# ML7000 Series

## METALLURGICAL MICROSCOPES

### INFINITY OPTICAL SYSTEM

**An infinity optical system for reflected light brightfield and simple polarization technique.**

### Features

#### **Eyepieces:**

Paired DIN KHW10X super wide 20mm field of view eyepieces.

#### **Viewing head:**

The ML7000 Series Metallurgical microscope is equipped with either an erect image binocular or non erect image trinocular viewing head inclined at 30° and rotatable through 360° for comfortable viewing. Each eyetube is provided with a graduated diopter adjustment. Interpupillary distance is adjustable between 52mm and 72mm (Erect image trinocular optional.)

#### **Objective Changer:**

Smooth operating, revolving quintuple ball-bearing nosepiece.

#### **Objectives:**

Infinity corrected, S.Planachromat objectives, M4X/0.10, M10X/0.25, M20X/0.40, and M40X/0.65

#### **Stage:**

Rectangular mechanical stage 172mm x 130mm top plate with 100mm X 100mm travel. Equipped with precision ball bearing guides and low position drop down coaxial controls for X-Y movement.

#### **Illuminator:**

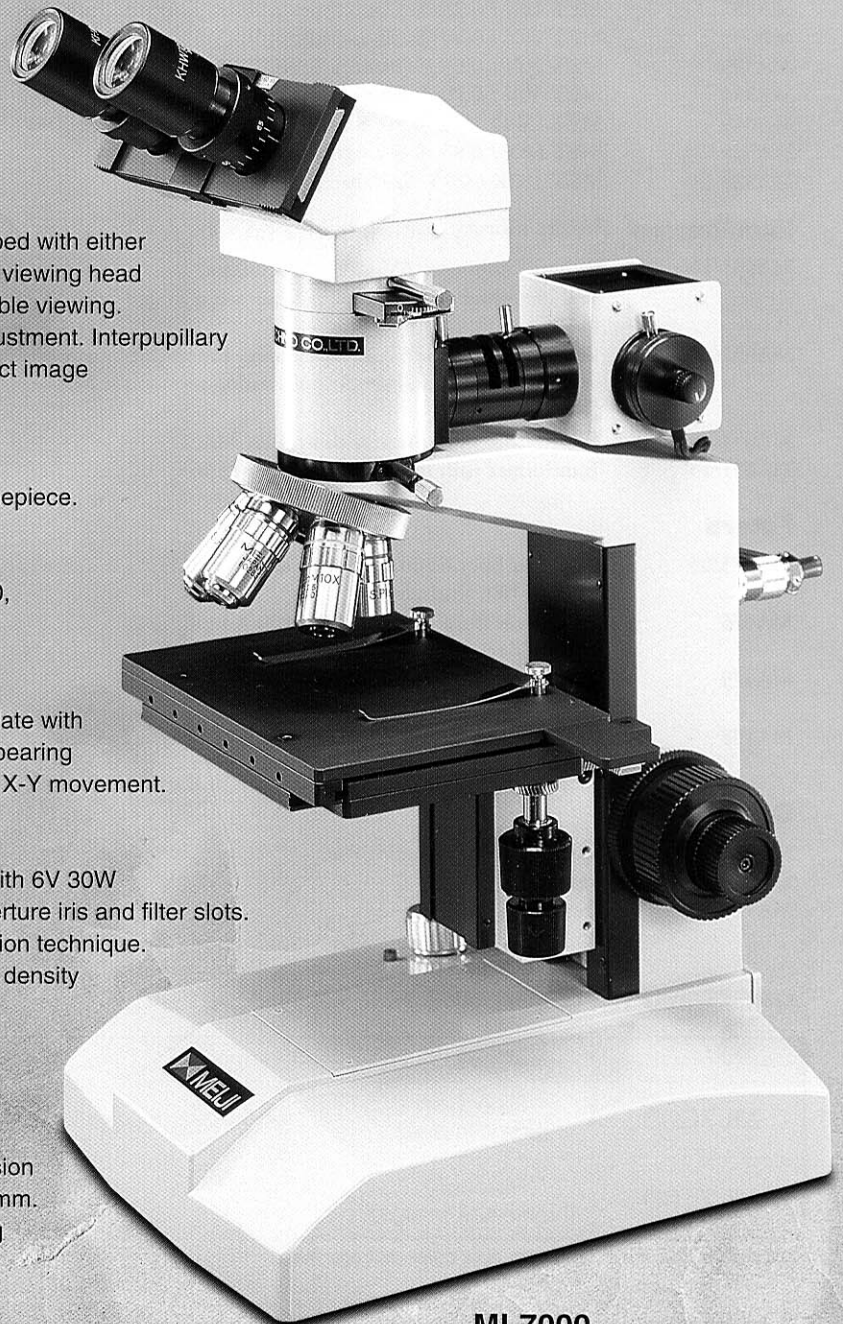
Vertical illuminator with full Koehler design equipped with 6V 30W Halogen light source, infinity system lens, field iris, aperture iris and filter slots. Capable of brightfield or simple reflected light polarization technique. Includes blue clear, green clear, polarizing and neutral density filter (ND8) in mounts. Transformer and variable rheostat control are built in the microscope base.

#### **Focusing Movement:**

Coaxial low positioned coarse and fine focus controls, graduated to 2-microns per division, are fitted with tension adjustment and safety auto stop. The focus range is 35mm. The movement runs in extra wide precision ball-bearing hardened steel tracks.

#### **Size and Weight:**

ML7000 Binocular 200mm(W) x 270mm (D) x 472mm(H), Net weight 6.8kg.  
ML7100 Trinocular 200mm (W) x 270mm(D) x 500mm(H), Net weight 6.9kg.



**ML7000**

# Components & Accessories

## Viewing Heads

- MA401/05 Binocular Head, erect image, with quartz depolarizer. (Same as MA657/05)  
 MA603/05 Trinocular Head, non erect image, with quartz depolarizer. A two position beam splitter directs 100% of the light to the eyepieces or directs 80% of the light to the trinocular tube and 20% of the light to the eyepieces.  
 MA495/05 Inclined Trinocular Head, erect image, with quartz depolarizer. A two position beam splitter directs 100% of the light to the eyepieces or directs 100% of the light to the trinocular tube. (Same as MA655/05)

## Eyepieces

- MA407 KHW Compensating 10X Eyepiece, Field number 20mm (Included).  
 MA408 HWF 15X Eyepiece, High eyepoint, Field number 12.2mm.  
 MA489 HWF 12.5X Eyepiece, High eyepoint, Field number 15mm.  
 MA409 HWF 20X Eyepiece, High eyepoint, Field number 9.2mm.

## Objectives (Infinity corrected)

- MA336 MET 4X / 0.10 S. Planachromat, W.D. 20mm. (Included)  
 MA330 MET 5X / 0.10 S. Planachromat, W.D. 20mm.  
 MA337 MET 10X / 0.25 S. Planachromat, W.D. 7.48mm. (Included)  
 MA338 MET 20X / 0.40 S. Planachromat, W.D. 5.28mm. (Included)  
 MA339 MET 40X / 0.65 S. Planachromat, W.D. 0.81mm. (Included)  
 MA344 MET 50X / 0.70 S. Planachromat, W.D. 0.36mm.  
 MA349 MET LWD 50X / 0.50 S. Planachromat, W.D. 6.0mm.  
 MA329 MET 60X / 0.85 S. Planachromat, W.D. 0.38mm.  
 MA328 MET 100X / 0.75 S. Planachromat, W.D. 0.27mm.

## Illuminators (With infinity tube lens FL=200mm)

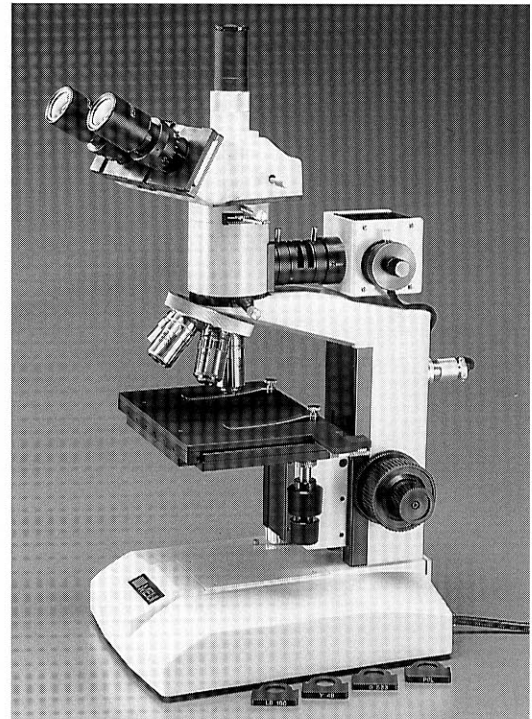
- MA651/100 Vertical Illuminator 6V 30W Halogen, full Koehler design for bright-field illumination and simple polarization techniques. Main voltage: 115 Volts.  
 MA651/200 Vertical Illuminator 6V 30W Halogen, full Koehler design for bright-field illumination and simple polarization techniques. Main voltage: 220/240 Volts.  
 MA651/05 Transformer with intensity control for MA651/100, 115V.  
 MA651/15 Transformer with intensity control for MA651/200, 220/240V.

## Filters

- MA475/05 Blue clear filter, 15mm diameter in mount for MA651/100. (Included)  
 MA476 Green clear filter, 15mm diameter in mount for MA651/100. (Included)  
 MA479 Polarizing filter, 15mm diameter in mount for MA651/100. (Included)  
 MA198 ND8 Neutral density filter, 15mm diameter in mount for MA651/100. (Included)

## Other Items

- MA326 Spare halogen lamp, 6V 30W.  
 MA327 Fuse 3A.  
 MA711 Dust cover.



**ML7100**

## Accessories For Measurement

- MA414 Filar Micrometer Eyepiece with inclined monocular head.  
 MA255 Linear micrometer, 10mm divided into 100 units, 21mm diameter for KHW10X eyepiece.  
 MA256 Linear micrometer, 5mm divided into 100 units, 21mm diameter for KHW10X eyepiece.  
 MA284 Cross-line reticule, 21mm diameter for KHW10X eyepiece.  
 MA540 Cross-line with 0.1mm graduations, 21mm diameter for KHW10X eyepieces.  
 MA292 Metal stage micrometer, 1mm divided into 100 units, 0.01mm.

## ORDERING INFORMATION FOR ML7000 SERIES

Model	Body	Eyepieces	Objectives	Illuminator
ML7000	Binocular [Erect Image]	KHW10X 20mm field of view	S.PLAN NET 4X, MET 10X, MET 20X, MET 40X	Vertical Koehler, 6V 30W halogen with clear blue, clear green, neutral density [ND8] and polarizing filter in mounts.
ML7100	Trinocular [Non-erect Image]			

Supplied in Styrofoam case with dust cover and operations manual.

Note: Please specify voltage when ordering.

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