UNITRON®

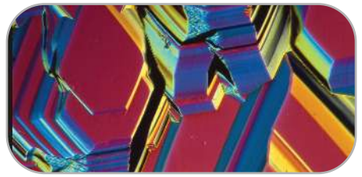
MEC4
INVERTED METALLURGICAL MICROSCOPE

Designed for the examination and analysis of metallurgical samples and prepared material for automotive, aerospace, and medical device industries.



Inverted Metallurgical Microscope
CAT# 14620

EXCELLENCE BY DESIGN SINCE 1952







The MEC4 inverted metallurgical microscope is designed for the examination and analysis of metallurgical samples and prepared material for automotive, aerospace, and medical device industries. The compact design of the MEC4 makes it an affordable inverted microscope with outstanding optical performance, perfect for in-line sample inspection for manufacturing, production and assembly applications where strict control of materials is required.



Fixed stage design and included attachable mechanical stage provide control even with heavy samples



Brightfield and simple polarizer/analyzer are also included

Blue, green and frosted filters also come standard with the MEC4

With a wide range of optional c-mount adapters, the MEC4 can easily be connected to our Excelis HD or Teledyne Lumenera® digital cameras for easy image processing. Designed for brightfield and simple polarization observation, the MEC4 delivers professional features at an affordable price in a compact, easy to use ergonomic design.



The included stainless steel Ø12mm and Ø25mm teardrop stage plate inserts come standard. The larger openings allow for large differences in sample size and for more of the sample to be observed.

Key Features



MEC4 shown with optional Excelis™ HD camera (CAT# AU-600-HD) and c-mount adapter (CAT# 00-2010-35)

1. **WF 10x/22mm focusing eyepieces**
2. **Trinocular viewing head with imaging port**
3. **Attachable mechanical stage**
4. **Ø12mm & Ø25mm teardrop stage plate inserts**
5. **Rear carry handle position**
6. **5 watt variable LED illuminator**
7. **Coaxial X-Y stage control**
8. **Coaxial coarse and fine focus**
9. **Light path selector**
10. **Illuminator intensity control**
11. **Polarizer/analyzer slider**
12. **Quintuple nosepiece**
13. **Optional camera & c-mount** *(not included)*

MEC4
INVERTED METALLURGICAL MICROSCOPE

UNITRON®

Specifications

Optical System	Infinity M Plan Achromat LWD 5x, 10x, 20x and semi-apo 50x objectives Optional 100x dry objective is available
Observation Method	Brightfield and simple polarizer/analyzer 360° rotating; blue, green and frosted filters
Focusing	Vertical action movement revolving nosepiece (fixed stage); coaxial coarse and fine adjustment
Nosepiece	Quintuple revolving nosepiece
Stage	**Plain stage:** 160mm (W) x 250mm (L), includes Ø12mm and Ø25mm aperture teardrop stage insert plates **Mechanical stage:** Travel range 120mm (X) 78mm (Y); the mechanical stage is standard on each complete unit; coaxial stage control; includes Ø12mm and Ø25mm aperture teardrop rectangular stage plates **Stage extender plate:** 70mm X 180mm
Illuminator	5 watt variable LED illuminator, built-in lever type condenser, field and aperture diaphragms
Eyepieces	WF10x/22mm focusing eyepieces with roll-down eyeguards
Viewing Head	45° inclined trinocular viewing head with 54-75mm interpupillary adjustment
Imaging Port	100% binocular or 20% binocular / 80% camera
Dimensions & Weight	300 x 650 x 437.5mm (w x d x h) with mechanical stage; weight: 23 lbs.
Optional Accessories	Digital cameras with measurement and materials software C-mount adapters with 0.35x, 0.50x, 0.65x, 1.0x, and photo tube Reticles: Crossline, grid, Austenite grain size and custom patterns are available Stage micrometers, Metric (mm) and English (inches) with NIST traceability are available
Warranty	5 year limited warranty for parts and labor; 1 year warranty on electronic components and LED bulb

METRICAL
METALLURGICAL & MATERIALS ANALYSIS



METRICAL Metallurgical & Materials Analysis Software *(sold separately, CAT# 14625-USB)* provides computer-aided quantitative analysis results in accordance with ISO and ASTM technical standards.

- **Grain Size:** ASTM E-112, E-930, E1181, ISO 643-03, JIS G 0551-05 BS 490 DIN 643-03, IS-4748-88, SIS 111101 GOST 5639-82
- **Non-Metallic Graphite:** ASTM E-1245 E ASTM E45-97, ISO 4163-82, DIN 50602
- **Decarburization:** ASTM E1077, ISO 3887, JIS-0557-98 BS-6617, IS-7754 DIN 50192
- **Porosity:** ASTM 247
- **Dendrites and Hardness analysis (Brinell and Vickers)**
- **Live measurement**

Streamlines image capture, measurement and enhancement, live measurement and accuracy of results. Includes modules for Grain Size, Porosity, Segmentation, Decarburization, SG Iron / Nodularity, Gray Iron, Carbide banding, and more.

Camera included: *includes 5MP, USB 3.0 camera. Requires 0.65x adapter (sold separately). Compatible with Windows 10 or higher. See Metrical brochure for PC requirements.*

Metrical software shown on a computer monitor (not included) with included 5MP USB 3.0 camera, and c-mount adapter (CAT# 00-2010-65, sold separately).

UNITRON®
73 Mall Drive • Commack, NY 11725 • 631-543-2000 (P)
Email: info@unitronusa.com • www.unitronusa.com

CE ISO 9001:2015 ISO 14001:2015 RoHS