



National Award for
Outstanding Entrepreneurship - 2010



National Award for
Quality Products in Instrumentation - 2002

INVERTED METALLURGICAL MICROSCOPE : IMS 7001C

FEATURES

- Excellent UIS Optical system providing excellent Optical function of **Polarization & Dark Field** observation
- **Infinity, Plan**, Achromatic objectives and wide-field eyepieces, give clear pictures and wide field view
- Compact and steady modular main frame body is embodiment for shock resistance
- Stable stand structure, advanced stage design with low & pre positional control knob is widely used in laboratories to observe and identify the structure of various metals & alloys
- Universal anti reflected coated optics ensuring full contrast, flat field image with natural color reproduction
- USB Camera having easy synchronization with PC & measurement software makes microscope state of the art system



IMS 7001C/D

SPECIFICATION

Magnification	100X to 1000X with standard Eyepiece & Objectives 12.5X to 2000X with optional Eyepieces & Objectives
Standard Eyepieces	High Point WF 10X/Ø22mm
Optional Eyepieces	. 5X, 12.5X, 16X, & 20X . Micrometer 10X(10mm X 100 parts) With least count =0.1mm . Filari Micrometer 10X . Grain size measurement WF 10X (08 grain engraved) . Objective Micrometer Disc with least count =0.01mm
Standard Objectives	Infinity, Plan , Achromatic PL 10X/0.25, PL 20X/0.40, PL 50X/0.70 & PL 100X/0.85 (Dry)
Optional Objectives	Infinity, Plan , Achromatic 4/5X, 40X, 60X, 80X, 100X (Oil)
Viewing Head(Inclined at 45°)	Sidentop Trinocular (three parts, two for visual observation & one for camera attachment) Interpupillary distance: 53mm to 75mm, adjustable angle for two Eyepieces
Light Distribution	50 : 50%, between camera port and binocular eyepieces
Color Filter	Yellow, Blue, Green & Ground
Focusing	Coaxial coarse & fine focusing with tension adjustable and up-stop. Fine resolution : 2um
Nose Piece	Quintuple (Backward ball bearing inner locating)
Polarizer Attachment	Set of Polarizer & Analyzer attachment
Mechanical Stage	Two layer & three – axis moveable with coaxial X-Y movement Size: 242mm X 200mm & Travel : 30mmX30mm. Stage plate hole: Ø10mm, Ø20mm
Illuminator	6V/30W, 220 Volts AC/50Hz, Halogen lamp, adjustable brightness



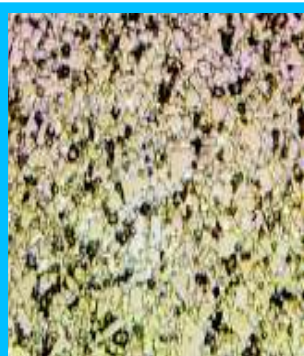
INVERTED METALLURGICAL MICROSCOPE : IMS 7001D

SPECIFICATION

Magnification	100X to 1000X with standard Eyepiece & Objectives 12.5X to 2000X with optional Eyepieces & Objectives
Standard Eyepieces	WF 10X/Ø22mm
Optional Eyepieces	. 5X, 12.5X, 16X, & 20X . Micrometer 10X(10mm X 100 parts) With least count =0.1mm . Filar Micrometer 10X . Grain size measurement WF 10X (08 grain engraved) . Objective Micrometer Disc with least count =0.01mm
Standard Objectives (BD)	Infinity, Plan, Achromatic PL 5X/0.12, PL 10X/0.25, PL 20X/0.40, PL 50X/0.70
Optional Objectives (BD)	Infinity, Plan, Achromatic 40X, 60X, 80X, 100X
Viewing Head(Inclined at 45°)	Sidentop Trinocular (three parts, two for visual observation & one for camera attachment) Interpupillary distance: 53mm to 75mm, adjustable angle for two Eyepieces
Light Distribution	50 : 50%, between camera port and binocular eyepieces
Color Filter	Yellow, Blue, Green & Ground
Focusing	Coaxial coarse & fine focusing with tension adjustable and up-stop. Fine resolution : 2um
Nose Piece	Quintuple (Backward ball bearing inner locating)
Polarizer Attachment	Set of Polarizer & Analyzer attachment
Mechanical Stage	Two layer & three – axis moveable with coaxial X-Y movement Size: 242mm X 200mm & Travel : 30mmX30mm. Stage plate hole: Ø10mm, Ø20mm
Illuminator	6V/30W, 220 Volts AC/50Hz, Halogen lamp, adjustable brightness

CUSTOMIZATION

The Specification given in this literature are broad details. We can customize & supply these Microscopes as per your requirement & application



Phase



Grain



Flakes



Coating

Images taken on Inverted Model with Image Capturing Device



INVERTED METALLURGICAL MICROSCOPE : IMS 7001E

FEATURES

- Special design for large & thin size specimen
- High quality Infinity optical system, equipped with Bright & Dark Field long working distance, Plan, Achromatic objectives
- Multi-optical system designed to support both binocular tube & digital camera observation
- Microstructure study and photography in Bright Field, Dark Field, Polarized Light and Differential Interference Contrast (DIC)
- This microscope can be widely applied for studying the microstructure of metal. It can conduct observation and photography in bright field, polarized light, differential interference. It also simultaneously measures and analyze when it is equipped with special software
- Kohler illumination system



IMS 7001E

What is Differential Interference Contrast Microscopy ?

Differential Interference Contrast microscopy is an optical microscopy illumination technique used to enhance the contrast in unstained, transparent samples. DIC works on the principle of interferometry where differences in the light refraction by different parts of the specimen allow them to become visible during microscopic evaluation.

This lighting scheme produces an image with the object appearing black to white on an gray background



View of the transparent specimen visible under DIC Microscopy Illumination



This picture depicts the close look of DIC Assembly



INVERTED METALLURGICAL MICROSCOPE : IMS 7001E

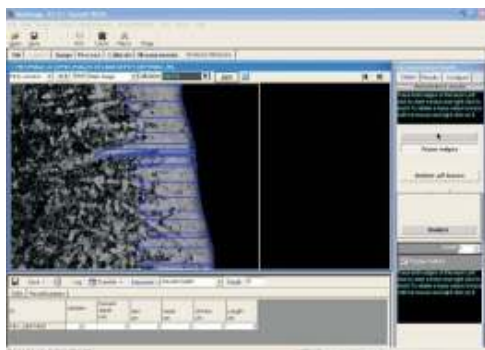
SPECIFICATION

Magnification	50X to 1000X with standard eyepieces & objectives 25X to 2000X with optional eyepieces & objectives
Standard Eyepieces	WF 10X / Ø20mm
Optional Eyepieces	5X, 12.5X, 16X & 20X Micrometer 10X (10mm x 100 parts) with least count = 0.1mm Filar Micrometer 10X Grain size measurement WF 10X (08 grains engraved) Objective Micrometer Disc with least count = 0.01 mm
Standard Objectives	Infinitive Plan, Bright/Dark Field Achromatic 05X/0.12 (BD), 10X/0.25 (BD), 20X/0.40 (BD), 50X/0.70 (BD), 100X/0.90 (BD)
Viewing Head (30° Angle)	Sidentop Trinocular (three parts, two for visual observation & one for camera attachment) interpupillary distance : 48mm to 75mm
Light Distribution	50 : 50% between camera port & binocular eyepieces
Color Filters	Yellow, Blue, Green & Ground
Focusing System	Coaxial coarse & fine focus with tension adjustable and upstop. Fine resolution : 2 µm
Nosepiece	Quintuple (Backward ball bearing inner locating)
Polarizer & Analyzer	Set of polarizer & Analyzer attachment
DIC	This facility for examination of unstained, transparent specimen
Mechanical Stage	Two layer & three-axis moveable with coaxial X-Y movement. Size : 226 X 178mm & Travel : 40mm X 40mm, Stage plate hole : Ø16mm, Ø40mm
Illuminator	12V / 50W, 220V AC/50Hz, Halogen lamp, adjustable brightness DIC

What is Optical Calibration :

Calibration is an exercise to determine the accuracy of an optical component for any number of optical applications. Calibration Standards are very precise measuring devices that allow optical components to be accurately evaluated after multiple uses to ensure continued effectiveness or determine when recalibration is required.

Glass Disc Micrometer Stage is one such calibration standard which is used to check the correctness of optical magnification of eyepieces and objectives. Vaiseshika supplies its microscopes duly checked and calibrated on all magnification sections.



Measure Decarb Depth According to ASTM E1077

Calibration Certificate

Vaiseshika can supply its microscopes along with calibration certificate traceable to **National Physical Laboratory (NPL), New Delhi / International Standards.**

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