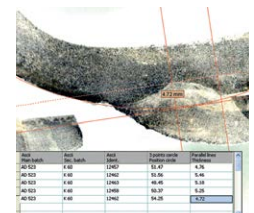




MICROSCOPY & IMAGE ANALYSIS

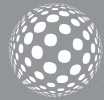
IMAGIN







IMAGIN



MESURA 200

- Image Capture
- Image Archiving
- Image Enhancement
- Calibration
- Interactive Measurement
- Phase Content Analysis
- Annotation
- Report Generation
- Direct Transfer to Excel

GRANO 200

- Image Capture,
- Image Archiving
- Calibration
- Grain size determination in accordance with ASTM E112 and EN ISO 643
- Instant detection of Grain boundaries
- Direct transfer to Excel

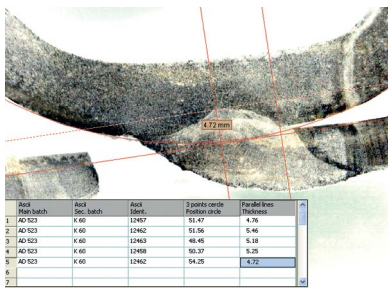
NODULA 200

- Image Capture
- Image Archiving
- Calibration
- Automatic detection and coloring of Graphite Nodules.
- Cast iron analysis according to EN ISO 945 including nodularity Ferrite/Pearlite fractions etc.
- Report Generation
- Direct transfer to Excel

MESURA 200

IMAGIN MESURA 200 allows you to view the live microscope image, compare it with stored images and if necessary save it to the system. Several databases can be created according to the customers, projects, materials or specimens.

IMAGIN MESURA 200 has several measurement tools for performing manual measurements of lines, curves, angles, areas etc. after which they can be saved and archived. Many application areas exist like "Weld Assessments, Macro analysis, PCB component measurements etc.



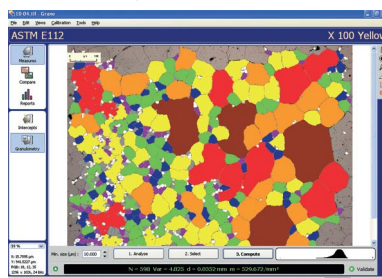
With 'Annotation' facility, it is possible to add comments, graphics, arrows etc. directly on the image allowing you to label specific areas of interest.

IMAGIN MESURA 200 allows you to design your own template or select one of METKON's standard templates for "Report Generation" where the text and images are automatically placed. When required, it is also possible to transfer data directly to Excel for further processing.

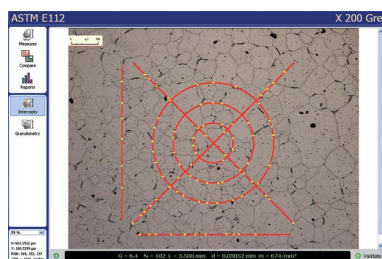
GRANO 200

Customer requirements for imaging applications increase in parallel to the complexity of material applications in research field as well as in industry.

IMAGIN GRANO module has been designed for automatic measurement of grain size according to ASTM E112 and EN ISO 643. Firstly, the grain boundaries are detected after which the grain size can be calculated in different ways;

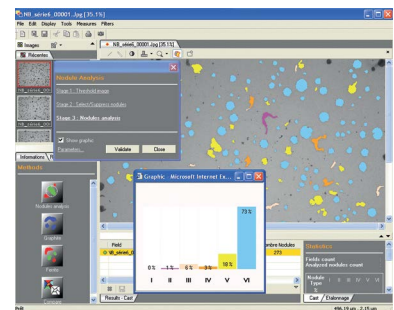


"Intercept Method" counts the number of intersection in each field and the grain size is calculated by Abrams 3-circle or Linear Equations. "Area Method" determines the size of each individual grain by area after which the grains are categorized for the calculation of fractions.



NODULA 200

IMAGIN Modular Imaging System offers flexibility to the customer to select and build his own system according to his individual needs. More modules can be added at any time when needs grow.



IMAGIN NODULA 200 module is designed for the analysis of graphite in cast irons especially in Ductile and Gray Iron Foundries and Quality Control Labs. Nodularity assessment is made by percent count and nodules proportion. It is also possible to measure "Area percent ferrite, Area percent graphite and Area percent Pearlite". Archiving of all images with calibration and generating Reports creates an additional advantage to increase productivity and repeatability.

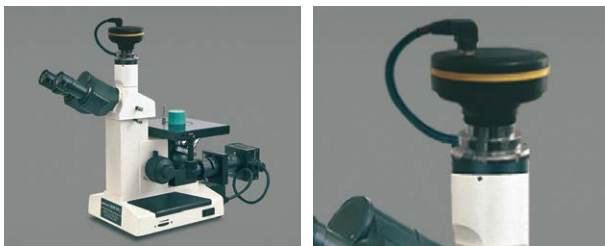
UPM 902 Upright Metallurgical Microscope

Order No	:60 04
Head	:Trinocular, 30° inclined, 360° rotating.
Eyeieces	:WF10x/22mm.
Nosepiece	:5-positions, reversed, bi-directional
Objectives	:5x/0.12, 10x/0.25, 20x/0.40, 50x/0.75, with anti-fungus treatment
Magnifications	:50x, 100x, 200x, 500x
Focusing system	:Coaxial coarse and fine.
Stage	:Double layer with mechanical sliding stage, 233x147 mm, moving range 78x54 mm. with specimen holder
Condenser	:0.2/0.7 N.A. swing-out type, with iris diaphragm, centrable and focusable.
Illumination	:LED system. 65.000 hours life time. 6300K temperature. 3.6W low energy consumption, light intensity equivalent to a 50W halogen bulb. Brightness is adjustable.
Metallurgical Attachment	:High-power white LED system with brightness control; field and aperture diaphragms (centrable).
Filters	:Blue, Polarizer & analyzer (360° rotatable) Automatic voltage sensing, 100/240 Vac, 50/60 Hz.



Order No:	
62 40	Ergonomic binocular head 30°-60°
62 41	Eyeiece WF10x/22mm
62 42	Eyeiece WF15x/16mm
62 43	Eyeiece micrometer EWF10X/22mm
60 41	26x76mm micrometric slide. R:1mm, div:0,01mm
60 74	Photo adapter for IMAGINE HARDWARE SET 0.5x focusable

IMM 901 Inverted Metallurgical Microscope



Order No	: 60 01
BasicMagnifications	: 100x - 1000x
Eyeieces	:WF 10x eyepieces paired (field of view Ø16mm)
Objectives	:10x/0.25 (W.D. 6.7mm), 25x/0.40 (W.D. 0.76mm) 40x/0.65(W.D.0.67mm),100x/0.25(oil)(W.D. 0.3mm)
Stage	:Mechanical stage 200 x 152mm travel with right hand Coaxial dropdown controls, movable range 15 x 15mm
Focusing	:Coaxial low position coarse & fine focus controls graduated to 2 microns per division.
Illumination	:6V 20W adjustable light sources with halogen lamp
Size&Weight	:540L x 195W x 320H mm & 10kg

Order No:	
60 11	WF 12.5x eyepiece (10mm diameter)
60 12	WF 10x with reticles (0.01 mm division)
60 22	Stage micrometer for IMM Reticle, 1mm with 100 division
60 12	Eyeiece, WF 10x with ASTM Grain size E112

IMM 901 Inverted Metallurgical Microscope

IMM 902 Inverted Metallurgical Microscope

Order No	: 60 05
Head	: Trinocular, 45° inclined.
Eyepieces	: WF10x/22mm.
Nosepiece	: 5-positions.
Objectives	: 5x/0.15, 10x/0.3, 20x/0.45, 50x/0.55.
Magnifications	: 50x, 100x, 200x, 500x.
Focusing system	: Coaxial coarse and fine.
Stage	: 250x160mm; mechanical stage with lowered ergonomic coaxial controls.
X-Y range	: 120x78mm.
Diaphragms	: Field and aperture diaphragms [centrable].
Illumination	: 12V/50W halogen bulb in external case. Centrable bulb and brightness control.
Filters	: Blue, polarizer & analyzer Automatic voltage sensing, 100/240 Vac, 50/60 Hz.

Order no:	
60 25	Holder for metallurgical samples(15 mm hole)
60 45	Mechanical stage, IMM 902
62 42	Eyepiece WF15x/16mm
62 53	Eyepiece micrometer PL10x/22mm
60 41	26x76mm micrometric slide. R:1mm, div:0,01mm
60 55	Objective 100x/0,80 [dry]
60 74	Photo adapter for IMAGINE HARDWARE SET, 0.5x focusable
60 65	12V/50W halogen bulb



PST 901 Trinocular Stereo Zoom Microscope



PST 901 Trinocular Stereo Zoom Microscope

Order No	:60 02
BasicMagnifications	:6.5x - 45x
Eyepieces	:WF 10x, paired
Objectives	:6.5x - 45x
Stage	:Trinocular zoom head and Post Stand Fluorescence ring illuminator
Focusing	:Rack and pinion system, with anti-static PVC dust cover
Size&Weight	:170W x 250D x 55H mm & 6.0 kg

Order No:	
60 13	WF 10x with reticles,100 division, for PST
60 23	Stage micrometer for PST, Reticle, 5 mm with 100 divisions
60 43	Mechanical Stage for PST 901
60 53	Objective, 0,5x

PST 902 Trinocular Stereo Zoom Microscope



Order No	:60 07
Optical System	:Parallel Optics
Head	:Binocular 30° inclined, 360° rotatable
Stand	:Large stand, fixed arm type, with Led illumination, coaxial macro & micro focusing knobs
Eyepieces	:WF10x/22mm, high-point
Objective	:Zoom 0,8x ...6,4x
Working Distance	:80 mm.
Photo/Video Beam Splitter	:1 port
Illumination	:Ring light led illuminator, with continuous and external brightness control. Automatic voltage sensing, 100/240 Vac, 50/60 Hz.

Order no:

62 71

Eyepiece (pair) WF15x/16 mm, with dioptic adjustment & rubber cup

62 72

Eyepiece (pair) WF20x/12 mm, with dioptic adjustment & rubber cup

62 73

Micrometric eyepiece WF10x/24 mm, with dioptic adjustment & rubber cup

61 71

Objective 0,3x(w.d. 280mm)

61 72

Objective 0,5x(w.d. 118mm)

61 73

Objective 2x(w.d. 32,5mm)

60 76

Photo adapter for IMAGINE HARDWARE SET, 0.5x focusable

60 69

Special protective glass, PST 902

60 66

Cleaning kit

IPP 902 Polarization Laboratory Microscope

Order No	:60 06
Head	:Trinocular, 30° inclined, 360° rotating
Eyepiece	:WF10x/22mm
Bertrand lens	:Swing-out type; centrable (for Conoscopy/Orthoscopy)
Polarizing attachment	:360° rotating analysing filter, λ tint plate, 1/4 slip $\lambda/4$ tint plate, quartz wedge tint plate
Nosepiece	:1/4 slip, quartz wedge 4-positions with centering mechanism for all objectives
Objectives	:For transmitted and incident polarized light 5x/0.12, 10x/0.25, 20x/0.40, 50x/0.75, with anti-fungus treatment
Magnifications	:50x, 100x, 200x, 500x
Focusing system	:Coaxial coarse and fine
Condenser	:0.2/0,9 N.A., with iris diaphragm, focusable and centrable. With rotating polarizing filter (swing-out type)
Illumination	:LED system. 65.000 hours life time. 6300K temperature. 3.6W low energy consumption, light intensity equivalent to a 50W halogen bulb. Brightness is adjustable.
Incident light	:LED system polarizing attachment with built-in polarizer filter, aperture diaphragm and field diaphragm. Automatic voltage sensing, 100/240 Vac, 50/60 Hz.

Order No:

62 42

Eyepiece WF15x/16mm

62 43

Eyepiece micrometer EWF10x/22mm

60 41

26x76mm micrometric slide. R:1mm, div:0,01mm

60 58

60x/0.80 achromatic objective

61 81

Blue filter, 45mm diameter

61 82

Green filter, 45mm diameter

61 83

Yellow filter, 45mm diameter

61 84

Frosted glass filter, 45mm diameter

62 60

Eyecup (pair)

60 74

Photo adapter for IMAGINE HARDWARE SET, 0.5x focusable

60 66

Cleaning kit



SPECIFICATIONS

IMAGIN Hardware Set

CMOS Color Camera, Resolution 5.0 M. Pixels with Interpole Mod USB2 - PC Interface, C Mount - Microscope Interface. Including DUROLINE, IMM or PST adapter according to application.

Order No: 66 10

IMAGIN MESURA 200

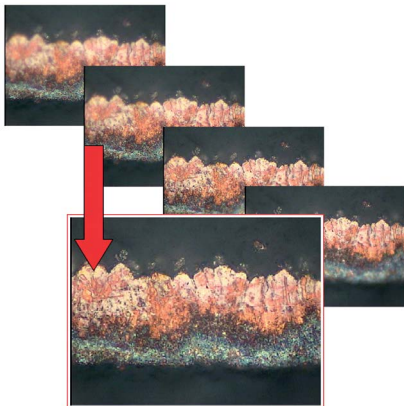
Image capture, Image archiving, Image enhancement, Calibration, measure Length, thickness, width, angle, radius, curve perimeter, area. Multi Image Alignment, Multi Focus Function. Phase content analysis, Add Text & Marker Arrow and Calibration Scale, Image annotation, Image report generator, Automatically measurements and threshold function, Direct transfer to Excel.

Order No: 66 02

IMAGIN GRANO 200

Image capture, save and calibration, Grain sizing software in compliance with ASTM E1382 / E112 and EN ISO 643, Horizontal, vertical, diagonal or circles interception methods. Instant detection of Grain Boundaries, Powerful report generator, Direct transfer to Excel.

Order No: 66 04



IMAGIN NODULA 200

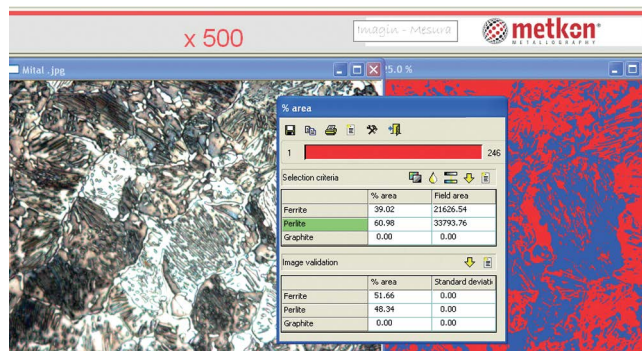
Image capture, save and calibration, Graphite nodules automatically detected and colored with regards to shape and size, Cast iron analysis in compliance with ASTM A247 including nodularity, Ferrite / Perlite fraction. Automatically count Sphericity %, gray iron flakes, calculates percent, graphite and classifies the flakes by size. Powerful report generator, Direct transfer to Excel.

Order No: 66 05

IMAGIN TRIO

A complete set for image analysis. Including IMAGIN Hardware Set and all software modules (IMAGIN MESURA 200, IMAGIN GRANO 200 ve IMAGIN NODULA 200).

Order No: 66 07



* Other voltages and frequencies available upon request. Please state when ordering. All specifications are subject to change without notice.

