

MICROSCOPY & IMAGE ANALYSIS

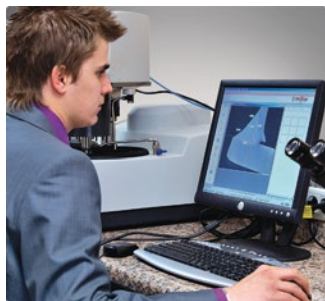
# IMAGIN



**metken**<sup>®</sup>  
Technology behind Specimen

**20**  
YEARS

# IMAGIN<sup>®</sup>



## 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, Save & Calibration  
Grain size determination in accordance with ASTM E112 and EN ISO 643  
Instant detection of Grain boundaries  
Direct transfer to Excel

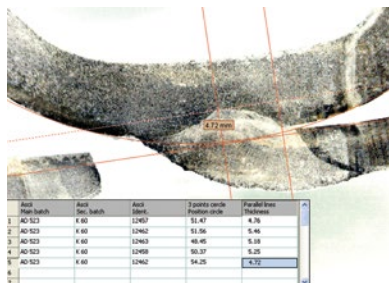
## NODULA 200

Image Capture, Save & 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 Assesments, Macro analysis, PCB component measurements etc.



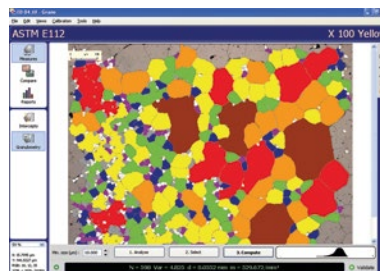
With 'Annotation' facility, it is possible to add comments, graphics, arrows etc. directly on the image allowing you to label specific areas of interest.

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.

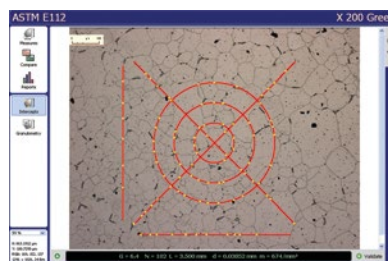
### GRANO 200

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;

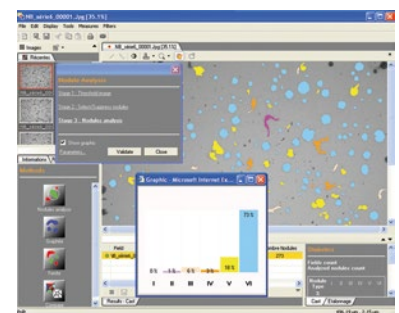


"Intercept Method" counts the number of intersection in each field and the grain size is calculated by Abrams 3-circle or Linear Equations. "Area Method" determines the size of each individual grain by area after which the grains are categorized for the calculation of fractions.



### 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 assesment 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.

#### Statistics

Fields count : 3  
Analyzed nodules count : 819

Node Type	I	II	III	IV	V	VI
%	0	1	6	3	18	73

**Details**

Class	1	2	3	4	5	6	7	8
%	0	0	0	0	0	7	32	61

**Details**

Max Nodule diameter type VI. (mm) : 0.035  
Max. fiber length (mm) : 0.059  
Nodule Density (/mm<sup>2</sup>) : 653.1  
Surface Density % : 10.3  
% Ferrite : 83.0  
% Graphite : 10.0  
% Pearlite : 7.0  
% Ferrite/Matrix : 92.2  
% Pearlite/Matrix : 7.8  
% Ferrite/Pearlite : 1185.7

## IMM 901 Inverted Metallurgical Microscope



<b>BasicMagnifications:</b>	100x - 1000x
<b>Eyepieces</b>	: WF 10x eyepieces paired (field of view Ø16mm)
<b>Objectives</b>	: 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)
<b>Stage</b>	: Mechanical stage 200 x 152mm travel with right hand Coaxial dropdown controls, movable range 15 x 15mm
<b>Focusing</b>	: Coaxial low position coarse & fine focus controls graduated to 2 microns per division.
<b>Illumination</b>	: 6V 20W adjustable light sources with halogen lamp
<b>Size&amp;Weight</b>	: 540L x 195W x 320H mm & 10kg
<b>Order No</b>	: <b>60 01</b>



### Optional Accessories

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

IMM 901 Inverted  
Metallurgical Microscope

## PST 901 Trinocular Stereo Zoom Microscope



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



### Optional Accessories

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

PST 901 Trinocular Stereo  
Zoom Microscope

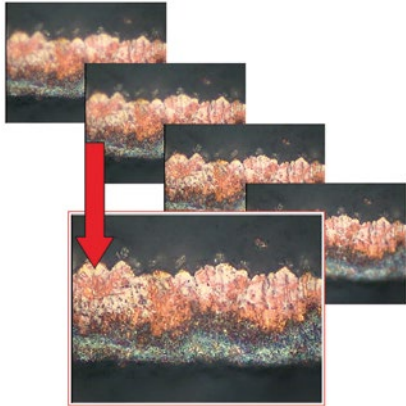
## Specifications

### IMAGIN Hardware Set

CMOS Color Camera, Resolution 5 M. Pixels with Interpole Mod USB2 - PC Interface, C Mount - Microscope Interface. Including DUROLINE, IMM 901 or PST 901 adapter according to application.

### IMAGIN MESURA 200

Image capture, Image archiving, Image enhancement, Calibration, Multi Image, Multi Focus Function, Interactive measurements (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.

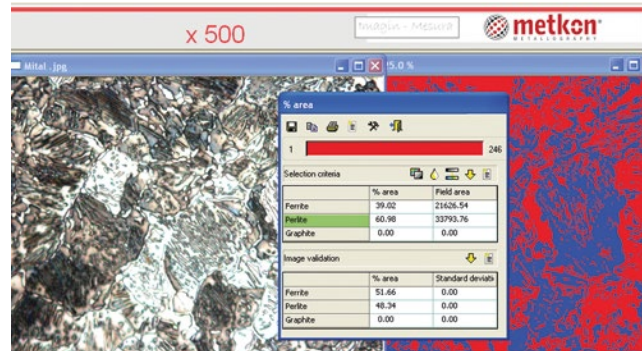


### IMAGIN GRANO 200

Image capture, save and calibration, Grain sizing software in compliance with ASTM E112 and NF EN ISO 643, Intercepts method and Image comparison Grain sizing with granulometry analysis, 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 coloured with regards to Shape and size, Cast iron analysis in compliance with EN ISO 945 including nodularity, Ferrite / Perlite fraction, Powerful report generator, Direct transfer to Excel  
Order No: 66 05



### System Requirements

Min configuration for the PC is either Windows XP or Windows 2000, for optimal performances, a Pentium 4 is recommended, RAM memory about 512Mb - 1Gb

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