Phenom PoroMetric Software

Fully automated measurements of pores
The visualization and analysis of pores are easier than ever before with the Phenom desktop scanning electron microscope (SEM) and Thermo Scientific™ Phenom PoroMetric software. The combination of speed, ease of use and superb imaging quality of the Phenom and image pore analysis software of PoroMetric creates a powerful tool for inspecting a wide range of samples like filters and membranes.

**Phenom PoroMetric Software**
The Phenom desktop SEM with Phenom PoroMetric software allows easy generation and analysis of SEM images. The integrated Phenom PoroMetric software allows the user to gather data on distribution of pores, and pore parameters like pore size and aspect ratio. The fully automated measurements of Phenom PoroMetric allow a level of visual exploration beyond optical microscopy that can lead to new discoveries and innovations. The histogram and generated images can be exported in the selected format to be used as a reporting tool. Phenom PoroMetric allows the user to get a better understanding of the characteristics of the materials, as it extracts detailed information of the complete set of pores. Phenom PoroMetric is the first in its class when it comes to measurements of pores. This results in valuable information on the effects which changing the pore structure has on the porosity and filtration process.

**Imaging Specifications**

<table>
<thead>
<tr>
<th>Pore analysis</th>
<th>100 nm - 0.1 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pore detection</td>
<td>8/16 bit image processing</td>
</tr>
<tr>
<td>Speed</td>
<td>More than 1000 pores per minute</td>
</tr>
<tr>
<td>Measured properties</td>
<td>Size, shape, count</td>
</tr>
<tr>
<td><strong>Pore parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Area, circle equivalent diameter, aspect ratio, major axis, minor axis and manual measurement</td>
<td></td>
</tr>
</tbody>
</table>

**Graphical display**
- Plot graphs of the circle equivalent diameter
- SEM images and detected pores

**Output**
- Report in docx format
- TIFF image format
- CSV file
- Project file (.POME) for offline analysis

**Part of ProSuite**
- Network storage enabled
- Phenom integrated system
Main advantages of PoroMetric
- Integrated software in ProSuite
- Acquire images directly from the Phenom desktop SEM
- Correlate pore features such as area, aspect ratio, major and minor axis
- Fast and convenient operation improves workflow and makes scheduling simple and predictable
- Image collection is limitless as digital files are easily stored on a network or USB disk for data sharing, communication, or later reference
- The Phenom’s ease of use and ability to operate in any environment means anyone can use it to visually interpret a wide range of samples
- Statistical data with high quality images.
- Automatically generates a report in docx format
- Ability to revisit detected pores

Markets & Applications
The Phenom desktop SEM and PoroMetric software are easy to use and allow the user to extract the best results. Companies that will benefit the most from PoroMetric can be found in the:
- Filter and sieve industry
- Foam industry
- Ceramic industry
- Pharmaceutical industry
Phenom ParticleMetric
The Phenom desktop SEM with Phenom ParticleMetric software allows easy generation and analysis of SEM images. The integrated Phenom ParticleMetric software allows the user to gather morphology and particle size data for many submicron particle applications.

The fully automated measurements of Phenom ParticleMetric allow a level of visual exploration beyond optical microscopy that can lead to new discoveries and innovations in powder design, development, and quality control.

Phenom FiberMetric
In combination with the Phenom desktop SEM, the Phenom FiberMetric software allows the user to produce accurate size information from micro and nano fiber samples.

The automated image characterization generates hundreds of measurements in seconds. In addition to more accurate data acquisition, the automated measurements of the Phenom FiberMetric guarantee a fast return on investment.

With Phenom FiberMetric it has become possible to measure and analyze samples with large fiber diameter differences.

**Phenom ParticleMetric Specifications**

<table>
<thead>
<tr>
<th>Particle analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size range</td>
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<tr>
<td>100 nm - 0,1 mm</td>
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<tr>
<td>Particle detection speed</td>
</tr>
<tr>
<td>More than 1000 particles per minute</td>
</tr>
<tr>
<td>Measured properties</td>
</tr>
<tr>
<td>Size, shape, count</td>
</tr>
</tbody>
</table>

**Particle parameters**
Area, circle equivalent diameter, surface area, circumscribed circle diameter, volume by area, circumference, aspect ratio, circularity, elongation, grayscale, major axis, minor axis, convex hull, gravity centre (x,y), pixel count, convexity.

**Graphical display**
- Plot graphs in linear log or double log scale, by number or by volume
- Scatter plots of any given parameter
- SEM images of individual particle

**FiberMetric Specifications**

<table>
<thead>
<tr>
<th>Fiber detection</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 nm to 40 μm</td>
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<tr>
<td>1 to 1000 measurements per image</td>
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</table>

**Part of ProSuite**
- Network storage enabled
- Phenom integrated system

Find out more at [thermofisher.com/phenomworld](https://thermofisher.com/phenomworld)