



Phenom™

See beyond the power of light

FEI helps you see beyond the limits of optical instruments with the Phenom™ personal electron microscope. With 20 times the magnification of a conventional light microscope, the Phenom combines high-resolution imaging with extreme ease-of-use. Engineers, researchers, educators and students can make high-quality sub-micron images with as little as 10 minutes of training.

Phenom is ideal for detailed imaging of sub-micron particles, fibers, microtools, electronic components and more. The optical camera, motorized stage and touch-screen user-interface work together to help you easily navigate to a region of interest from a 24x “bird’s eye view”. Simply tap the place on the optical image that you want to investigate, and the stage automatically centers on that region of interest. Then switch to high-resolution electron imaging in seconds with the touch of an icon. Navigate in this mode the same way as in the optical mode, and zoom until 24,000x by simply turning a rotary knob. Save your images on a USB memory stick or network storage location for off-line analysis and distribution.

Phenom can handle a wide range of samples with minimal preparation. Sample loading is very easy and safe due to our patented vacuum load-lock technology. High-resolution electron images are ready within 30 seconds.

Key benefits

- Intuitive touch-screen user interface requires little or no training
- Includes an optical camera for never-lost navigation
- Magnification range 24 - 24,000x
- Images at 2048 x 2048 pixels
- Resolution up to 30 nm
- Sample loading in less than 30 seconds
- Automated sample control

Essential specifications

System

- Imaging module
- 17" touch screen monitor
- Rotary knob
- Diaphragm vacuum pump
- Power supply
- USB 2.0 flash drive

Imaging modes

- Light Optical
 - Magnification fixed: 24x
- Electron Optical
 - Magnification range: 120x to 24,000x
- Digital zoom: max. 12x

Illumination

- Light Optical
 - Selectable axial and off-axis LEDs
- Electron Optical
 - Long lifetime thermionic source (5 kV accelerating voltage)

Digital image detection

- Light Optical
 - Color CCD Camera
- Electron Optical
 - High Sensitivity Backscatter Electron Detector (Compositional and Topographical modes)

Image format

- JPEG, TIFF, BMP

Image resolution options

- 456 x 456; 684 x 684; 1024 x 1024 and 2048 x 2048 pixels

Data storage

- USB 2.0 Flash drive

Sample stage

- Computer controlled motorized X and Y

Sample size

- 25 mm (dia) x 30 mm (h)

Sample loading time

- Light Optical < 5 s
- Electron Optical < 30 s

Dimensions & weight

- Imaging module: 286(w) x 566(d) x 495(h) mm, 50 kg
- Diaphragm vacuum pump: 145(w) x 220(d) x 213(h) mm, 4.5 kg
- Power supply: 156(w) x 300(d) x 74(h) mm, 3 kg
- Monitor: 375(w) x 203(d) x 395(h) mm, 4.6 kg

Room temperature

- 15 °C ~ 30 °C (59 °F ~ 86 °F)

Humidity

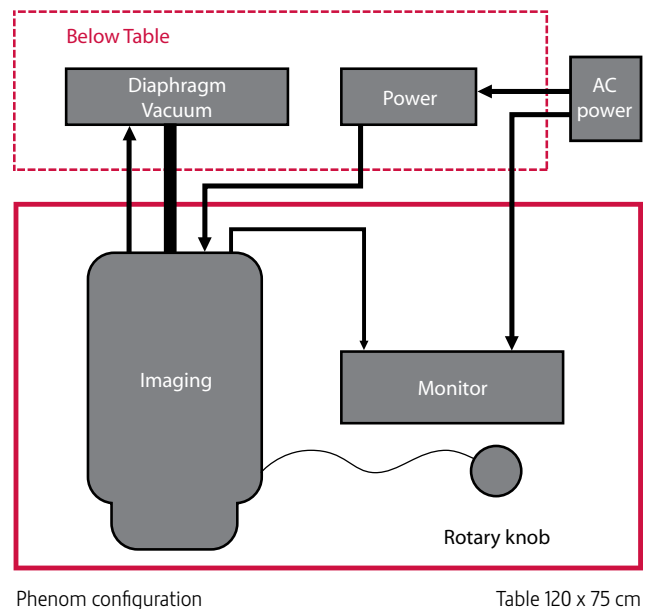
- < 80% RH

Power

- Single phase AC 110 - 240 Volt
- 50/60 Hz, 300 W (max.)

Recommended table size

- 120 x 75 cm, load rating of 100 kg



Phenom configuration

Table 120 x 75 cm

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