

Tehniline kirjeldus

Riigihanke nimetus: **desktop (tabletop, benchtop) elektronmikroskoobi ostmine**

Manufacturer: Thermo Fisher

Model: Phenom ParticleX GSR + SED

Link: <https://www.thermofisher.com/lv/en/home/electron-microscopy/products/desktop-scanning-electron-microscopes/phenom-perception-gsr.html>

General description	The Thermo Scientific™ Phenom™ ParticleX GSR Desktop SEM is the desktop SEM that can run automated GSR analysis
Light Optic	Magnification range: 3-16x
Electron imaging	Magnification range: 160-200 000x
Resolution	<10nm
Acceleration voltage	<ul style="list-style-type: none">• Default 5kV, 10kV, 15kV• Using advance mode from 4.8-20.5 kV
Electron source	CeB ₆ (lifetime ≈1 500h)
Vacuum	Low-medium-high modes
Image format	JPEG; TIFF; PNG
Image resolution	960 x 600, 1920 x 1200, 3840 x 2400 and 7680 x 4800 pixels
Electron detectors	BSD & SED detectors included
EDS (x-ray detector)	<ul style="list-style-type: none">• Detector type: Silicon Drift Detector (SDD) Thermoelectrically cooled (LN₂ free)• Detection active area 25mm²• Energy resolution: 132 eV <i>Mn Ka</i>• Multi-channel analyzer with 2048 channels at 10 eV/ch• Max. input count rate 300,000 cps• Hardware integration Fully embedded
Software	<p>The GSR reporting license improves the workflow and reporting of Perception for forensic applications in Gunshot Residue detection. It enables reclassification and quantification of runs, working hour schedule, standard compliance to ASTM 1588 and automated runs at 20kV. The GSR reporter includes histograms, quick print, revisit particle reporting, operator and run summaries.</p> <ul style="list-style-type: none">• System completely controlled by keyboard and mouse• Automatic peak ID• Compliant with ASTM E1588 and ENFSI Best Practice Guidelines• Versatile output formats: PDF, Word, Excel, CSV• <i>Revisiting and manual analysis of suspect GSR particles</i>• Spectral files Export functions: CSV, JPG, TIFF, ELID, EMSA

	<ul style="list-style-type: none"> • <i>Saving images to commonly used file formats like JPG, TIFF, PNG with resolutions: 960 x 600, 1920 x 1200, 3840 x 2400 and 7680 x 4800 pixels</i> •
Sample holder	<ul style="list-style-type: none"> • GSR sample holder can hold 30 12 mm GSR pin stubs plus the necessary calibration samples (total 36 pin stubs). • Fully motorized sample holder • The maximal sample size 100(L) x 100(W) x 40 (H)mm

*Warranty for the system 24 month