Technical Data

Essential Specifications	ULTRA PLUS	ULTRA 55	ULTRA 60
Resolution (optimal WD) *All resolution specifications are dependent on the system configuration.*	0.8 nm @ 30 kV (STEM mode) 0.8 nm @ 15 kV 1.6 nm @ 1 kV		
Magnification	12 - 1,000 ,000 x in SE mode / 100 - 1,000 ,000 x with EsB® detector		
Emitter	Thermal field emission type, stability > 0.2 %/h		
Acceleration Voltage	0.02 kV - 30 kV		
Probe Current	Configuration 1: 4 pA – 20 nA / Configuration 2: 12 pA – 100 nA		
Detectors	EsB® detector with filtering grid (0 – 1500 V), High efficiency in-lens SE detector, Chamber mounted Everhart-Thornley detector,		
	Integrated AsB® detector		
Chamber	330 mm (Ø) x 270 mm (h), 3 EDS ports 35° TOA, CCD-camera with IR illumination	330 mm (Ø) x 270 mm (h), 3 EDS ports 35° TOA, CCD-camera with IR illumination	520 mm (Ø) x 300 mm (h), 2 EDS ports 35° TOA, Integrated 8" airlock, CCD-camera with IR illumination
Vacuum System	Complete dry pumping system composed of Backing Pump, Turbomolecular Pump and Ion Getter Pump,		
	Automatically controlled Quiet Mode to switch off Backing Pump after sample transfer when vacuum threshold is achieved		
Charge Compensator	Fully automated and pneumatic retractable local gas injector	——	——
Specimen Stage	5-Axes Motorised Eucentric Stage X = 130 mm, Y = 130 mm, Z = 50 mm, T = -3 to 70° R = 360° (continuous)		6-Axes Motorised Super-Eucentric Specimen Stage X = 152 mm Y = 152 mm Z = 43 mm Z' = 10 mm T = -15 - 60° R = 360° (continuous)
	6-Axes Eucentric Stage X = 100 mm, Y = 100 mm, Z = 42 mm, Z' = 13 mm, T = -4 to 70° R = 360° (continuous)		
Image Processing	Resolution: Up to 3072 x 2304 pixel, Noise reduction: Seven integration and averaging modes		
Image Display	High end 19" flat panel TFT colour display monitor with SEM image displayed at 1024 x 768 pixel		
System Control	SmartSEM®* with Windows®XP, operated by mouse, keyboard and joystick with optional control panel		
Space Requirement	Minimum footprint: 1.97 m x 1.73 m, Minimum working area: 3.5 m x 5.0 m		Minimum footprint: 2.81 m x 1.73 m, Minimum working area: 3.5 m x 5.0 m
**SmartSEM® – Fifth generation SEM control Graphical User Interface*			

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