

Essential specifications (TEM)

Items	Description		
	HT7800	HT7830 (High resolution lens)	
Resolution (Lattice) *1	0.20 nm (Off-axis, 100 kV)	0.19 nm (On-axis, 120 kV)	
Magnification	Zoom	×200–×200,000 (HC mode) ×4,000–×600,000 (HR mode) (Non-rotating zoom system)	×1,000–×300,000 (HC mode) ×4,000–×1,000,000 (HR mode) (Non-rotating zoom system)
	Low Mag	×50–×1,000	×100–×1,000
Accelerating voltage	20–120 kV (100 V/step variable)		
FOV rotation	×1,000–×40,000 (HC mode)	NA	
	±90° 15° steps		
Specimen stage	4-axis eucentric goniometer stage	5-axis eucentric goniometer stage	
Stage traverse	X, Y: ± 1 mm, Z: ± 0.3 mm		
Maximum tilt angle	±70°	±10°	
Main camera	8M pixel (Other cameras are also available)		
Standard features *2	Auto focus, Microtrace, Autodrive, Autophoto, Live FFT display, Measurement function (manual/automatic distance measurement), Low dose, API (auto pre-irradiation), Image navigation function, Column with mild baking function, Whole view function*3, Drift correction function, 3D tilt image acquisition function*3, 3D reconstruction software*3, etc.		

Option accessories

STEM, Cold finger, X-ray analysis system (EDX), LaB₆ filament*4, Beam stopper*4, Selected area aperture*4, 5-axis eucentric goniometer stage*4, TEM mapping, Various specimen holders, Chiller unit, Dry pump, etc.

Installation site conditions

Items	Description	
Power	Voltage	Single-phase AC 100 V ±10%
	Frequency	50/60 Hz
	Capacity	Max. 4.0 kVA (including STEM)
	Grounding	Independent grounding with resistance of 100 Ω or less
Cooling water (Use a chiller)	Temperature: 15–20 °C (Stability at ±0.1 °C/30 min) Flow: 1.8–2.2 L/min, Pressure: Approx. 0.05–0.15 MPa Inlet/Drain: Rc 3/8 (1 each)	
Compressed air	Air pressure	0.35–0.5 MPa
Stray magnetic field	Maximum 1.0 × 10 ⁻⁷ T or less	
Room	Ceiling height	220 cm or more (height of instrumentation: 199 cm)
	Temperature	18–25 °C
	Humidity	30–60 %RH

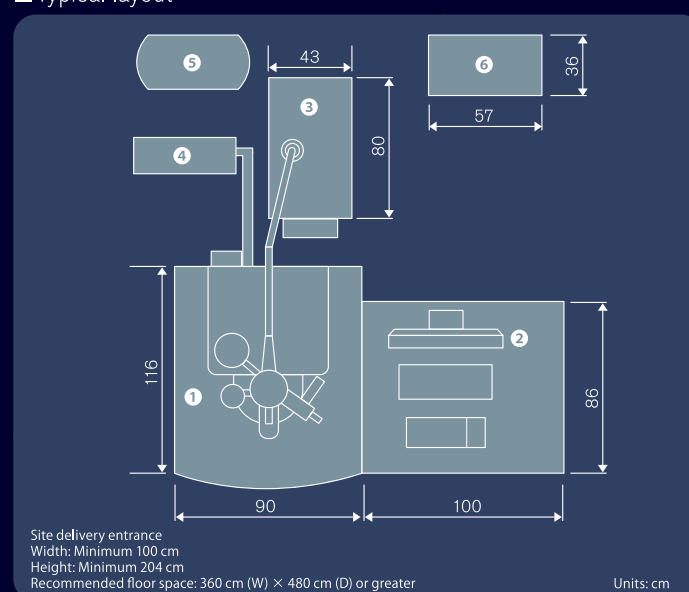
*1 : Resolution is guaranteed by specific cameras.
 *2 : These features may vary depending on the options selected.
 *3 : Not included in HT7830.
 *4 : Included in HT7830.
 *5 : Optional.

System appearance



with options

Typical layout



Items	Size (W×D×H, cm)	Weight (kg)
1 Column unit	90×116×199	677
2 Display unit	100×86×73	117
3 High-voltage transformer	43×80×70	230
4 Rotary pump	53×24×30	27
5 Air compressor	56×28×53	27
6 Chiller unit*5 (recommended)	57×36×104	80

NOTICE: For correct operation, please follow the instruction manual when using the instrument.

Specifications in this catalog are subject to change with or without notice, as Hitachi High-Technologies Corporation continues to develop the latest technologies and products for our customers.

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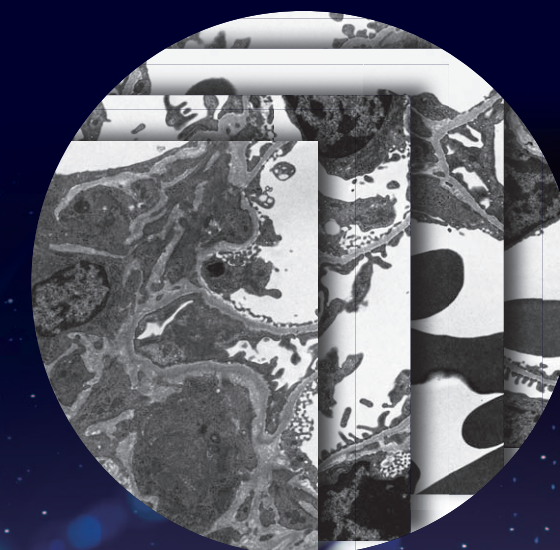
Tokyo, Japan
www.hitachi-hightech.com/global/science/
 24-14, Nishi-Shimbashi 1-chome, Minato-ku, Tokyo 105-8717, Japan

For technical consultation before purchase, please contact:
customercenter.ev@hitachi-hightech.com

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