TECHNICAL SPECIFICATION & COMMERCIAL BID SCHEDULE (ALL-IN-ONE)
Equipment: Turnkey 4K UHD Laparoscopy Tower System with Complete Telescopes, Access, Surgical Instruments, Advanced Energy & Ancillary Equipment
Techno-Commercial Tender Schedule

S.N.	Module / Component Block	Technical Specifications & Scope of Supply	Qty	Total Price Including GST
A.1	**4K 3-Chip CMOS Camera & Processor**	Native 4K UHD (3840 \times 2160) 3-chip CMOS sensor, BT.2020 wide color gamut; camera head with optical zoom & programmable buttons; 12G-SDI & HDMI 2.0 digital video outputs.	1 Set	
A.2	**4K Medical Monitor & LED Light Source**	31–32" 4K UHD anti-glare medical-grade display (16:9, DICOM preset); cold LED light source (\ge300W equivalent, 50,000 hrs life) with **two \ge4.5 mm fiber-optic light cables**.	1 Set	
A.3	**Heated High-Flow Insufflator**	High-flow \ge40–45 L/min CO_2 insufflator with built-in gas heating element, real-time pressure sensing, and primary cylinder connection hose.	1 Unit	
A.4	**Digital 4K Video Recorder**	Medical 4K video/still capture unit with 2–3 TB internal hard drive, USB/DICOM export, and foot controls for recording/snapshots.	1 Unit	
A.5	**Medical Trolley & Online UPS**	Heavy-duty ergonomic powder-coated cart with adjustable shelves, drawer, cable conduits, and cylinder carrier; dedicated 2–3 kVA online UPS with 15–30 min battery backup.	1 Set	
B	**4K Rigid Telescopes (Full Set)**	• 10 mm 0° 4K Autoclavable Telescope (1 No.) • 10 mm 30° 4K Autoclavable Telescope (2 Nos.) • 5 mm 30° Autoclavable Telescope (1 No.) *(All with scratch-resistant sapphire tip lenses)*	4 Nos.	
C	**Access & Trocar Set**	2 Veress needles, 4 \times 5 mm trocars with safety valves, 2 \times 10/11 mm trocars, 2 \times 12 mm trocars, 1 Hasson open trocar, 2 port reducers (10-to-5 mm), 1 fascial closure device.	1 Set	
D	**General Surgery Lap Instruments (2 Full Sets)**	Two complete sets: Maryland dissectors (2), curved scissors (2), fenestrated graspers (4), bowel graspers (2), Babcock (2), right-angle dissectors (2), hook electrodes (2), bipolar forceps (2), needle holders (2), clip appliers (2), 5 mm suction-irrigation cannula (2), knot pushers (2), specimen retrieval systems (2).	2 Sets	

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E	**Gynaecological Lap Instruments (2 Full Sets)**	Two complete sets: Clermont-Ferrand / Spackman uterine manipulators with cups (2), myoma screws (2), claw/ovarian graspers (4), atraumatic forceps (4), bipolar instruments (2), endoscopic scissors (2), needle holders (2), suction-irrigation tubes (2), reusable retrieval pouches (2).	2 Sets	
F	**Advanced ESU & Vessel-Sealing System**	300–400W electrosurgical generator (monopolar/bipolar) + feedback-controlled advanced vessel-sealing system (seals up to 7 mm vessels with thermal margin \le2 mm) complete with reusable laparoscopic sealer-divider instruments and foot switches.	1 Set	
G	**Smoke Evacuator & Sterilization Storage**	Surgical smoke evacuator with ULPA filter, 4 telescope protective sterilization containers, 4 perforated SS instrument wash trays with silicone mats, and SS endoscope storage cabinet with HEPA/UV airflow.	1 Set	
H	**Installation, Testing & 2-Year Warranty**	Turnkey delivery (F.O.R.), optical alignment, electrical safety testing, surgeon/staff clinical training, and minimum 2-year comprehensive on-site warranty (\le24–48 hr service SLA).	1 Job	
	TOTAL COMPLETE LAPAROSCOPY PACKAGE PRICE	**Turnkey contract covering Modules A through H complete with all optics, access, instruments, energy, and warranty.**	**Total**	
OPT	**Post-Warranty CMC (Years 3 to 5)**	Comprehensive Maintenance Contract covering 4K CCU, camera head, LED engine, insufflator, ESU, and telescopes.	3 Yrs	
OPT	**Post-Warranty AMC (Years 3 to 5)**	Annual Maintenance Contract covering preventive maintenance, optical calibration, gas flow verification,and labour	3 Yrs	