

**TECHNICAL SPECIFICATION FOR ELECTROSURGICAL UNIT**

Following are the minimum requirements. Products offered must meet these parameters herein.

S. No.	Technical Specification	REMARKS
1	Microcontroller based isolated Electrosurgical generator having both Monopolar and Bipolar outputs designed for all surgical procedures including laparoscopy and thoracoscopy application.	
2	Smart generator should be able to monitor changes in tissue impedance continuously and adjusts power automatically.	
3	It should have colour LCD Touch screen With audible and visual indicators and errors codes during the process of outputting.	
4	It must have Return Electrode Monitoring system and Power Peak System, minimizing the risk of tissue damage.	
5	<b>Monopolar outputs should have the following cutting and coagulating modes:</b>	
	5.1. Low cut for delicate tissue or Laproscopic cases having maximum power of 300w	
	5.2.Pure cut for clean, Precise cut in general surgery having maximum power of 200W.	
	5.3. Blend mode for cutting with homeostasis having maximum power of 200W.	
	5.4. Desiccate mode for low voltage contact coagulation suitable for Laproscopic and delicate tissue work.	
	5.5. Fulgurate mode for efficient non-contact coagulation in most applications.	
6	The unit should have two hand switching and two Footswitch Monopolar outputs and one hand switching and footswitching bipolar output.	
7	<b>It should have three bipolar modes with maximum power of 70W</b>	
	7.1.Precise mode have fine control of desiccation in delicate tissue.	
	7.2. Standard mode for applications at low voltage to prevent sparking.	
	7.3 Macro (Macro Bipolar) for bipolar cutting and rapid coagulation	

8	It should have vessal sealing technology along with supply of electrosurgical instruments used for laprosopic surgery.	
9	Minimum of two years comprehensive warranty including Reusable accessories should be provided along with technical support.	
8	<b>System configuration Accessories spares and consumables</b>	
8	IT must provide all standard accessories along with laproscopic compatible acessories desired for proper functioning of the machine as per requirement.	
10	<b>Power Supply Requirements</b>	
	10.1. Power input to be 220-240 VAC, 50Hz fitted with UK Plug.	
11	<b>Safety Standard and Training</b> 11. 1. Should be FDA,CE,UL of BIS approved . 11.2. Electrical safety class: Class 1/ Type CF. 11.3.Manufacture should have ISO certificate for quality standards. 11.4. Comprehensive training for Operator and Services Support for In- House Biomedical Engineer. 11.5. Safety Test : IEC 60601-2-2 and BS EN 60601-1-2:2015+A1:2021 11.6. Availability of Spare parts and all other accessories must be for 10 year.	
12	<b>Documentation</b>	
	12.1. User/Technical/Maintenance manuals to be supplied in English.	
	12.2Certificate of calibration and inspection.	
	12.3. List of Equipments available for providing calibration and routine Preventive maintenance support as per manufacturer guideline.	
	12.4. List of important spare parts and accessories with their part number and costing.	
	12.5. Log book with instruction for daily weekly monthly and quarterly maintenance checklist.	