



Running Contract Details	
Equipment Name	4K 2D & 3D Video Imaging System for Laparoscopy / Endoscopy
Running Contract Valid Till	03-11-2025
Tender Ref No	KMSCL/EP/T501(R)/1651C/2023
Tendered Quantity	10
Supplier Name	M/s Lakshmi Surgicals
GST No	32AACFL2603A1ZB
Installation & Delivery Period	8 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	Contact Details	
2nd Floor 12/307-C1 KSIE Building CIC Freight Station ICTT Road Anavathil Jn. Udyogamandal Eloor Ernakulam - 683501	Contact Person	Mr. Viji Vijayan
	Phone	0484-2988006
	Mobile No	99466 02090
	Email	lakshmisurgicals2005@gmail.com

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	2D and 3D 4K Camera Processor <i>Model & Make : TC201EN, TC304/ Karl Storz GmbH & Co</i>	1895672.53 Incl.GST :18%	132697.08	2028369.61
2	2D 4K Camera Head <i>Model & Make : TH121/ Karl Storz GmbH & Co</i>	1870727.03 Incl.GST :18%	130950.89	2001677.92
3	3D 4K Camera Head <i>Model & Make : 26606BCA/ Karl Storz GmbH & Co</i>	2928919.23 Incl.GST :18%	205024.35	3133943.58
4	10mm 30 degree 2D 4K Telescope <i>Model & Make : 26003BRA/ Karl Storz GmbH & Co</i>	393221.94 Incl.GST :12%	29000.12	422222.06
5	5mm 30 degree 2D 4K Telescope <i>Model & Make : 26046BRA/ Karl Storz GmbH & Co</i>	424396 Incl.GST :12%	31299.21	455695.21
6	Imported Trolley <i>Model & Make : UG230 / Karl Storz GmbH & Co</i>	199996.11 Incl.GST :18%	13999.73	213995.84
7	IMAGE/ VIDEO RECORDING AND DATA ARCHIVING SYSTEM (Not taken for evaluation) <i>Model & Make : WD350-EN/ Karl Storz GmbH & Co</i>	1567653.6 Incl.GST :18%	109735.75	1677389.35

Item-wise Price Details							
8	Power LED Rubina, OPAL1 NIR/ICG <i>Model & Make : TL400 / Karl Storz GmbH & Co</i>			916276.84 Incl.GST :12%	67575.42	983852.26	
9	Fiber Optic Light Cable , 300 cm, <i>Model & Make : 495TIP/ Karl Storz GmbH & Co</i>			50607.32 Incl.GST :18%	3542.51	54149.83	
10	55" 4K/3D Monitor <i>Model & Make : TM450 / Karl Storz GmbH & Co</i>			3249011.97 Incl.GST :28%	209662.8	3458674.77	
11	OR1 Cart for Monitor 42 - 64" <i>Model & Make : WA10007 / Karl Storz GmbH & Co</i>			102418.93 Incl.GST :18%	7169.32	109588.25	
12	3D Polarization Glasses, fogless <i>Model & Make : TM003/ Karl Storz GmbH & Co</i>			37089.25 Incl.GST :18%	2596.25	39685.5	
13	3D Clip-on Glasses <i>Model & Make : 9800C/ Karl Storz GmbH & Co</i>			5983.57 Incl.GST :18%	418.85	6402.42	
14	3D Polarization Glasses <i>Model & Make : TM003/ Karl Storz GmbH & Co</i>			37089.25 Incl.GST :18%	2596.25	39685.5	
15	Signal Converter Set <i>Model & Make : TM009/ Karl Storz GmbH & Co</i>			179177.67 Incl.GST :18%	12542.44	191720.11	
16	ENDOFLATORÂ® 50 <i>Model & Make : UI500 / Karl Storz GmbH & Co</i>			816066.94 Incl.GST :12%	60184.94	876251.88	
17	Insufflation Tube <i>Model & Make : UI004 /Endoscopy/ Karl Storz GmbH & Co</i>			4683.65 Incl.GST :12%	345.42	5029.07	
18	Insufflation Tubing Set <i>Model & Make : UI007 /Karl Storz GmbH & Co</i>			58156.61 Incl.GST :18%	4070.96	62227.57	
19	Gas Filter <i>Model & Make : 031122-25/ Karl Storz GmbH & Co</i>			18386.9 Incl.GST :18%	1287.08	19673.98	
20	Insufflators In-Line Filter <i>Model & Make : IN-LINE FILTER/ Karl Storz GmbH & Co</i>			18676.89 Incl.GST :18%	1307.38	19984.27	
21	High Pressure Hose <i>Model & Make : 20400027 /Karl Storz GmbH & Co</i>			19859.8 Incl.GST :18%	1390.19	21249.99	
				14794072.03	1027396.93	15821468.96	
Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	10 th Year
2D and 3D 4K Camera Processor							
Labour	2,70,500.00	2,97,550.00	3,27,305.00	3,60,035.50	3,96,039.05	4,35,642.96	4,79,207.25
Comprehensive	12,40,000.00	13,64,000.00	15,00,400.00	16,50,440.00	18,15,484.00	19,97,032.40	21,96,735.64

Other terms & conditions

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).

2. The supplier shall submit performance security amounting to 5.00% of the value of the supply order.
3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.
4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).
5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

Technical Specification

Equipment :2D and 3D 4K Camera Processor

I. 4K Resolution Medical Grade Monitor capable of displaying 3D, 55 Inch Monitor-QTY1

1. ALL in one Medical Grade Monitor capable of displaying:
 - a. 3D in 4K resolution
 - b. 2D in 4K resolution
 - c. 2D in Full HD resolution
 - d. 3D in Full HD resolution
 - e. Monitor should be capable of showing 2D/3D Near Infra-Red ICG Images in 4K Resolution.
2. Should be supplied with 3D glasses –10Nos
3. Should be supplied with its compatible stand for mobile movement in OR.
4. Certified to: ANSI/AAMIES60601-1:2005, UL60601-1, CAN / CSAC22.2NO.60601-1:14undEN60601-1.
5. CE label according to MDD, class I.

II. Camera Processor

1. Processor for following should be quoted. The same processor should have the compatibility of below options
 - a. 2 Dimensional endoscopic camera in 4K resolution(3840*2160)
 - b. 3 Dimensional endoscopic camera in 4K resolution(3840*2160)
2. System should have facility for Optical Contrast Differentiation System, and it should have special filter for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions.
3. The Same Processor Should be capable of Near Infrared fluorescence Imaging (ICG application) with below features in 2D AND 3D VIDEO OUTPUTS IN 4K RESOLUTION(3840*2160)
 4. Overlay: White light image with superimposed display of NIR/ICG fluorescence. Possible to select the preferred color for NIR/ICG imaging: Either blue or green.
 5. Monochromatic: NIR/ICG fluorescence signal in white. Background in black for maximum contrast.
 6. Intensity Map: White light image with superimposed display of NIR/ICG fluorescence. NIR/ICG signal display will appear in different colors depending on the strength of the detected NIR signal.
 7. Picture in Picture of visualization modes with Standard and Optical Contrast Differentiation.
 8. The system should have facility of 3x Digital Zoom Lens or more.
 9. The system should have facility for capturing 4KUHD, HD Stills and FULL HD Videos in External USB drive.
 10. Automatic adjustment of light intensity of light source and controlled from Camera head.
 11. Outputs: All Compatible outputs should be there(12GSDI, D.P)as a single output 4K resolution and DVI for HD resolution.

12. The Processor should have the option of Automatic Horizon Control While 3d camera head is connected.

13. Should be supplied with wire tray for 3D camera head sterilization

III. 4K2D Camera Head

1. Pixels: 3840X2160 Pixels

2. AGC: Microprocessor controlled

3. Lens: Integrated Zoom Lens f=19mm

4. Color Space: BT.2020 emulation

5. Control buttons: 3 (2 of them freely programmable).

6. Camera Head Should be able to perform both White light and Near Infra red application.

IV. 4K 3D camera head (3840*2160)

1. Integrated video laparoscope, 10mm, 30°direction of view

2. Two distal 4K resolution image sensors with depth of focus 30- 200mm, optimized for stereoscopic endoscopy

3. Slender and light design–weight should not be more than 420 gm for optimal ergonomics, integrated in a fine titanium case.

4. The 3D Camera head should have the option of AUTOMATIC HORIZON CONTROL for better orientation and Handling.

5. The 3D Camera Head should show NIR/ICG visualization modes: Overlay, Monochromatic and Intensity Map, in 4K resolution when connected to the processor.

6. Sterilization options: Autoclavable, Sterrad® 100S, NX, 100NX; Steris® system, V-Pro, and ETO

V. LED NIR Light source with Fiber optic cable

1. Should have Lumen>2000

2. Lamp life of approx.30,000hrs.

3. 4.8mm Fiber Optic Cable and 300 cm Long.

4. Should have touch display which provides an intuitive & user-friendly interface that directly displays relevant data

5. Lamp type : High-performance LEDs, white light LED and near infrared LED, which are active individually or simultaneously.

6. Certified To:- IEC 601-1&UL 544CE According to MDD, protectionclass1/CF

VI. TELESCOPES for 2D

Telescopes with the 4K system should be quoted with Dimensions as below for White light and Near Infrared application.

a. 10mm30 Degree with 300 cm or more working Length–Each1QTY.

b. 5mm 30 Degree with 290cm or more working Length–Each1QTY.

VII. Imported Endoscopic Trolley

1. Equipment Cart ,rides on 4 antistatic dual wheels equipped with locking brakes, central beam with integrated electrical sub distributors with 6 sockets, grounding plugs, modular in nature (should be able to add shelves and components later if required)

2. Should have central monitor holder to mount monitor with height adjustable, swiveling and tilting, swivel range approx. 360°, loading capacity max. 18 kg, with monitor mount VESA75/100.

3. Cart should have following dimensions in mm(wxhxd):

1. Equipment cart: 830x1474x730 approximately.

2. Caster diameter should be 125mm
3. It should consist of:

Base Module, equipment cart x1, Top Cover x1, Beam Package, 1x Shelf, size-630x25x510, 1x Drawer Unit with Lock, 1X Base Plate, 1x Camera holder

4. Cart should be compatible to accommodate followings when required,
 - a. At least 4 more shelves
 - b. isolation transformer
 - c. Counter balance plate
 - d. CO2 cylinder holder
 - e. Monitor holding arms (lateral)

VIII. CO2 Insufflator 50Ltr

1. Heatable insufflation tube for heating the CO2 gas up to patient body temperature.
2. Innovative Sensitive Mode for sensitive areas such as pediatric application with safety limits in the pressure up to maximum 15 mm HG and flow ranges up to maximum 15l/min.
3. High flow mode with flow performance up to 50l/min.
4. Individually programmable procedure list for starting device with personal presets.
5. Easy and intuitive use with user friendly color touch screen for easy and precise setting of set values for pressure and flow and of insufflation mode, as well as for clear display of corresponding set values and actual values.
6. Optical and acoustic alarm signals in the event of patient over pressure.
7. Fully automatic, electronically controlled gas refill.
8. Safety system: Constant monitoring of intra abdominal pressure; any over pressure is reduced immediately.
9. Applicable for use in Laparoscopy, in Thoracoscopy, in Proctology (for Transanal Endoscopic Operations) and for endoscopy of the upper and lower gastro intestinal tract as well as in Cardiac Surgery (open or endoscopically assisted cardiac surgery to assure an optimal air extrusion and minimizing risk of air micro emboli and for decreasing rate of contamination and minimizing risk of post operative wound infection—for minimally invasive cardiac surgery, (e.g. mitral valve surgery) and in Vascular Surgery (endoscopic vessel harvesting).
10. Control via Realistic User Interface.

Technical Specifications :

1. Gas flow: 0-50l/min.
2. Pressure: 0-30 mm Hg(4000Pa).
3. High flow mode (0 to 50l/min.)
4. Sensitive mode pressure 15mm hg & amp; flow 15l/min for sensitive application
5. Electronic control and colour touch screen.
6. Following data are displayed on touch screen:-Insufflation mode.
 - a. Set value pressure (0-30mmHg).
 - b. Current patient pressure.
 - c. Set value gas flow (0-50l/min).
 - d. Current gas flow.

- e. Gas consumption(0-999l).
- f. Status of gas heating.

IX. IMAGE/ VIDEO RECORDING AND DATA ARCHIVING SYSTEM (OPTIONAL

1. State of the art user friendly Medical grade system(certified to be used in OT) should be offered with following features,
 - a. User should have full control of the system from the sterile field via camera head buttons, optional touch screen, optional foot switch.
 - b. Parallel (synchronic or independent) recording of two image sources.
 - c. Still images and videos (optional with audio) in 2D Full HD or 3D (with optional 3D-camera system). Water mark feature.
 - d. Intelligent, adaptive storage management.
 - e. Storage location is freely definable and configurable.
 - f. Storage on internal memory (2TB, FIFO), USB storage media via 2.0 and 3.0, optical media (DVD writer, Blu-ray reader), network drive, FTP or via DICOM.
 - g. Automatic storage in the back ground to reduce the time between the interventions. Easy management and overview of open/automatic save processes.
 - h. Import of patient data via key board or DICOM work list.
 - i. Intra-and post operative printing via optional printer (local or network).
 - j. Various adaptable templates for printing to choose from.
 - k. Integrated surgical checklist following the WHO standard or customizable. Basic functions for the editing of still images and videos.
 - l. Play back of 2D and 3D content on separate monitor (optional 3D-system required).
 - m. Integrated file-viewer for still images, videos and check lists from diverse data sources.
 - n. Integrated security software as a protection against malware, independent from security patches of the operating system and it is only possible to run certified software.
 - o. Structured and clear user guidance, optimized for touch screen control.
 - p. Scalable range of functions.
 - q. Low noise generation and fast system start due to SSD-technology.
 - r. Should have seamless USB silicone key board with touch pad to enter details
 - s . Controllable via 12'' inbuilt touch screen.
 - t. Input Voltage: 100-240V AC.
 - u. Input Frequency: 50-60Hz.
 - v. Power output: 350Watt.
 - w. CPU: Intel® Core™i7-2600@3.4GHz.
 - x. Internal memory: SSD (70GB) |HDD (2 TB).

- y. RAM: 8GB.
- z. Connectors: 3x1 GB Ethernet (RJ45), 6xUSB2.0, 2xUSB3.0.
- aa. Image format: BMP, JPG, JPG 2000.
- bb. Video format: MPEG-4, MPEG-2, MOV.
- cc. Video signal inputs: 2x DVI-D.
- dd. Color system: PAL, NTSC.
- ee. Resolution still images: upto1920x1080, Aspectratio16:9.
- ff. Resolution videos: up to1920x1080 ProgressiveScan for 25/30frames.
- gg. Pre installed printer: SONYUP-DR80MD.
- hh. Type approval: IEC60601-1-1,EN60601-1, EN60601-2.

The DICOM 3 interface shall be installed to the system in order to allow the surgeon to view all the DICOM 3 images stored in the PACS system on a digital light box with in the operating rooms. Further more, all intraoperative images recorded can be sent via the DICOM 3 interface to the PACS system for further processing.

Note: -

1. All Equipment's should be certified by US FDA and CE European notified body. It should be from same manufacturer / OEM for better compatibility and outcome.
2. If CDSCO (Central Drugs Standard Control Organization) certification is required for the import and marketing of the equipment, then the same shall be submitted along with the technical bid
3. Warranty exclusions if any shall be discussed at the time of prebid meeting else the tender condition as per clause 6.31.20 shall prevail