

A. TECHNICAL SPECIFICATIONS FOR ADVANCED GI LAPAROSCOPIC SET

1.

Full High definition digital camera- Qty:01

- a. It should have pure digital signal with high definition video of 1920x1080p (min) native resolution and progressive scan technology both on camera head and console
- b. The system should have Digital and/or Optical Zoom to enhance the quality of Image size & cross specialty standardization of the camera system, regardless of the telescope used.
- c. Camera Head should have camera controls, controls for light source and insufflators and peripheral control .
- d. Integrated Gain/Shutter/Enhancement with automatic brightness control.
- e. Video Outputs: two DVI, one SVHS and one (optional) direct fiber optic output.
- f. The system should automatically optimize all settings. The system should be ready- to-use as soon as it is connected to the camera control unit.
- g. The system should be Menu driven, thus allowing the surgeon to program the camera head functions as per the surgical needs & requirement.
- h. Image system: 1/3" Progressive scan CCD/CMOS technology (preferable)
- i. Pixels : 1920 X 1080p pixels per chip (min)
- j. AGC: Microprocessor controlled
- k. Signal-no-noise ratio: 65-75 db
- l. Video output: S-video signal (for back up)
- m. Digital Video Interface: DVI-I
- n. Power supply : 100-240 VAC, 50/60HZ
- o. It shall be compatible with the Management System and can thus be controlled from inside the sterile area via Touch Screen and from outside the sterile area via keyboard and mouse at the Nurse Station.
- p. It should convert the optical images into a digital signal at the camera head level.
- q. The camera's CCDs should have a 16:9 aspect ratio with an acquisition resolution of 1920 x 1080 progressive scanning.
- r. PARFOCAL optical zoom to guarantee that the best quality image will be captured by the three (3) CCDs at the camera head.
- s. All-digital circuitry for increased image accuracy, less noise in the image, and no image degradation from camera head to video output.
- t. It should have par focal optical lens that can be connected to any telescope.

2.

High Resolution Monitors – Qty: 02

a.

Prof. A.D. Sharma .

Blind

Prof. M. Biskumar .

Prof. N.S. Taruni .

Prof. N.S. Taruni .

Prof. S. Narayana .

Prof. L. Ranjith

Prof. Shyam Sunder .

Prof. Shyam Sunder .

P

Hi - Definition color Monitor 26" Flat Panel Monitor

b.

PAL system compatible

c.

Composite, S-Video and DVI inputs

d.

Compact & Lightweight design

e.

Resolution more than 1100 lines

f.

It shall communicate with the Management System via an RS-232 cable.

g.

Pre-Sterilized transparent drape/cover at least 500 nos. to be offered along with this screen.

h.

All medical devices, Archiving system, and Communication systems shall be controlled from this touch screen.

i.

Should have fan less cooling to prevent introduction of contaminants into the sterile field.

j.

Low voltage (24 VDC) external power supply located away from the screen, removing any electrical concern.

k.

Front sealed, anti-glare overlay for the highest level of defense against liquid ingress.

l.

Screens with the following video inputs: •DVI-D (digital) •SDI (digital) •VGA, RGBS •S-Video •Composite •SOG input

3.

Light Source – Qty:01

It should be a Xenon Cold Light with a 300W Xenon lamp with a color temperature exceeding 6000°K. The light source should be suitable for virtually all endoscopic interventions and for producing excellent results especially for photographic and video documentation.

The light source should have the following features:

a. It should be compatible with the Management System and can thus be controlled from inside the sterile area via touch screen and from outside the sterile area via keyboard and mouse.

- b. Easy to use bundled controls for the control of all functionalities.
- c. Touch controls and digital displays to ensure safe and precise adjustment of the set values.
- d. Full light intensity should be reached as soon as the lamp is switched on.
- e. The brightness should be continuously adjustable from 0-100% regulated by a microprocessor controlled opto-mechanical dimmer in order to avoid instabilities of the arc and to ensure maximum lamp service life.
- f. The brightness can be regulated manually or automatically via the output signal of a video camera.
- g. An antifog air pump should be available for endoscopes which have a special antifog channel to prevent the lens from misting up.
- h. Stand-by function should be available to avoid switching the light source on/off frequently during short interruptions.
- i. Display of lamp service life
- j. Operating temperature: +10°C to +40°C, Lamp wattage: 300 W, Lamp voltage: 13-16 VDC
- k. Intuitive simple user interface with LED touch screen
- l. Should have more than 10000 hours bulb life
- m. Fiber Optic Light Cable (Size should be diameter > 3.5 mm, length > 160 cm)

4.

CO2 Electronic Insufflator Unit– Qty: 01

a.

It should be an insufflations device for universal application in Laparoscopic and Thoracoscopic examinations and operations. With accurate measurement and control of both the pressure and flow of gas it should enable the use of different operating modes, which can be tailored to specific situations such as the use of lasers or the performance of HF surgery.

It should also be capable of high flow rate (30 L/min) to compensate for the considerable loss of gas during complex Laparoscopic surgery. A heating element should be provided to prevent potential cooling of the patient.

b.

It should be compatible with the management system and can thus be controlled from inside the sterile area via Touch Screen and from outside the sterile area via keyboard and mouse.

c.

Easy to use bundled controls for the control of all functionalities

d.

Touch controls and digital displays ensure safe and precise adjustment of the set values.

e.

Bargraph displays should be easy to read and arranged clearly parallel to one another allowing the user to monitor the current actual and set values of all unit parameters at any time.

f.

During power-up, all systems should go through an automatic self-test and are only released after a positive result

g.

It should distinguish between two different supply modes: high pressure and low pressure.

h.

It should have Security Vent system to facilitate release of gas from abdomen to vent outside via insufflator in case of over pressure of CO2.

i.

It should be able to detect and give alarm in case of Veress needle is not placed properly in the abdomen cavity.

j.

High flow with LCD display

k.

Microprocessor controlled & software driven for upgradability

l.

Unit should include heated tubing, hose & yoke

m.

Internal leakage detection capability

n.

Having internal venting system for safety

o.

The CO2 thermal-insufflator should have the following technical specifications: •Power supply voltage: 100-240 VAC •Power frequency: 50-60 Hz •Operating conditions: +10°C to +40°C

5.

Original manufacturer's video cart with monitor arms -Qty: 01

a.

One adjustable monitor arm for adjustment of position of the monitor

b.

Mobile universal video trolley including 4 shelves, 3 of which should be fully height adjustable , provision for integrated cable ducts, 4 Anti-static smooth-running double casters, 2 of which can be locked.

c.

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Provision for all electric cable connections.

d.

Camera Head Holder for 3D Endo-camera

e.

Holder for light cables with connectors

f.

Cover assembly of the trolley consisting of : Lockable Tinted safety glass doors and lockable rear panel.

6.

Suction and Irrigation Unit – Qty - 1

It should be a combination of suction/irrigation pump for use in Laparoscopic, and other endoscopic interventions. The adaptation to the correct mode of surgery intended should happen automatically when the correct type of tubing is used. The insertion of pressure lines into the unit should be simplified for ease of use. The unit should be equipped with electronic safety circuits that cut the suction/Irrigation operation if the unit departs consistently from the preset values.

The Suction/Irrigation unit should have the following features:

a.

It should be compatible with the Management System and can thus be controlled from inside the sterile area via camera head, touch screen and from outside the sterile area via keyboard and mouse.

b.

Easy to use bundled controls for the control of all functionalities

c.

Touch controls and digital displays to ensure safe and precise adjustment of the set values.

d.

Bar-graph display should be easy to read and arranged clearly parallel to one another to allow the user to monitor the current actual and set values of all unit parameters at any time.

e.

During power-up, all systems should go through an automatic self-test and be only released after a positive result

f.

Safety functions that control any departure from operator settings

g.

Automatic recognition of type of procedure intended, when tubing is inserted

h.

Audible alarms in case of malfunction.

i.

Should have a suction mode that automatically maintains irrigation pressure and flow constant.

j.

Power supply voltage: 100-240 VAC, Power frequency:50-60 Hz, Operating conditions:+10°C to +40°C

7.

Communication System

A state of art communication System should be quoted to allow distribution of different images and sound (audio and video) to various monitors inside the OR and to remote locations such as the Lecture Room, Doctors Room, etc...The communication System should also be able to:

a.

Two way audio system with Audio control levels within the OR as well as signals leaving the OR.

b.

Route any image source to any destination via the the unit itself

c.

Broadcast real time images from any source from the OR to the conference room & doctor's room or any location of choice inside or outside the OR through a the LAN of the hospital.

End user control of the System should be possible via the camera head or via the communication unit itself. Located inside the sterile field, the control needs to be done in an intuitive manner requiring the least number of steps possible to have the System perform a given function

8.

IMAGE/VIDEO RECORDING AND DATA ARCHIVING SYSTEM – Qty-1

1.FULL-HD(1080P) IMAGE and Full HD(1080P)VIDEO RECORDING AND DATA ARCHIVING SYSTEM

2. BI-AMPLIFIED ACTIVE LOUDSPEAKER -1

3. WIRELESS HEADMIC-1

4. 1-WAY AUDIO/VIDEO STREAMER-1

a.

User friendly software designed specifically for medical purposes

b.

Should captures still images, video sequences and audio files

c.

Record still images and video in FULL HD at (16:9 format)

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d.

Writes multi-session and multi-patient CDs/DVDs

e.

Controllable via Touch Screen, camera head buttons, footswitch mouse and keyboard

f.

Fully controllable from inside and outside the sterile field

g.

Supports network storage on file servers

h.

Supports FTP storage

i.

USB support for storage on USB drives

j.

Customizable print-outs for the documented information

k.

HIPAA compliant

l.

Motherboard: Embedded FLEX-ATX

m.

Microprocessor: Intel® Core 2 DUO T7400

n.

Graphic: Intel® Extreme Graphics 2 Controller onboard

o.

Grabber-card: DVI-D, S- Video, Composite;

p.

Audio: AC97/DD5.1 onboard

q.

RAM: 2 GB DDR2 PC800

r.

Hard disk: 500 GB SATA 3.5"

s.

Drive: Slim SATA Blu-Ray/DVD RW/+R

t.

Grabber-card: DVI-D, SDI, S- Video, Composite

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The DICOM 3 interface should be installed in 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 within the operating rooms. Furthermore, all intra operative images recorded can be sent via the DICOM 3 interface to the PACS system for further processing.

9.

CENTRAL CONTROL UNIT – Qty -1

To provide full control for the Surgeon or his assistant of the OR Medical equipment via a Touch Screen. The system should be simple, user friendly, secure and upgradeable. The Central Control Unit should be able to manage the medical and non-medical devices inside the operating room integrating the endoscopy equipment, archiving and communication systems. In

addition, it should be able to control different Endoscopic units and to store up to 100 individual presets (by doctor and procedure, or both) for the endoscopy equipment that can be accessed for quick set up for individual physician

10.

Other terms and conditions

a.

Equipment must conform to high international standards and FDA approved and the vendor should have good number of installations in india.

b.

Original catalogue and literature to be enclosed

c.

Physical demonstration of the quoted model is mandatory and bid is likely to be rejected if physical demonstration is not given

d.

The comprehensive warranty will be 5 years (including all spares and labor) from the date of satisfactory installation of equipment. Also quote rates for comprehensive AMC (including all spares and labor) for 6th to 10th year, after expiry of warranty period. Cost of spares, accessories and consumables should also be quoted separately

e.

95% uptime of the equipment. Facility for good after sale & service with trained engineers posted in Imphal or Guwahati. In case the down time exceeds 5% in a calendar year, the comprehensive warranty will be extended beyond 5 years for double the number of days for which the unit is non functioning. Similar clause will apply each year of CMC

f.

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All required accessories should be quoted as essential accessories and all accessories like cables etc. for full functioning of the equipment is the responsibility of the supplying firm.

g.

The complete installation including accessories and requirement is the responsibility of the supplying firm. The equipment should be fully functional and compatible with the existing electrical equipments and other equipment's.

Technical Specification for Telescopes

TELESCOPES – Qty 1 each

I.

Telescope, diameter 10 mm, length 32 cm, autoclavable, variable direction of view from 0° - 120°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated.

II.

Forward-Oblique Telescope 30° enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated.

III.

Forward-Oblique Telescope 30° enlarged view, diameter 5 mm, length 29 cm, autoclavable, fiber optic light transmission incorporated, connection for fiber optic light cable offset by 90°.

IV.

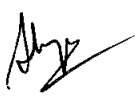
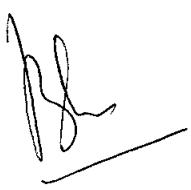
Straight Forward Telescope 0° enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated.

V.

Telescope 45°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated.

VI.

Telescope 45°, enlarged view, diameter 5 mm, length 29 cm, autoclavable, fiber optic light transmission, incorporated.



Annexure A

No. PUR/EQUIP/LAP/RIMS-HOS-18

Date: 15/05/2018

1. ROCHARD ABDOMINAL RETRACTOR SYSTEM

Technical Specification:-

1. The instrument quoted should be of high quality stainless steel (German).
2. All the items should be BIS Approved Certificate.
3. Demonstration whenever required should be arranged.
4. Five years of standard warranty.

Sl.No.	Abdominal Retractor Set	Quantity
1.	Rochard holding system, 2 arms dismantle for fastening to both lateral bars of the operating tables	1
2.	Rochard Retractor Fixation Device 19 cm	1
3.	Rochard Abdominal Retractor 48x90 mm, 31cm	1
4.	Rochard Abdominal Retractor 48x105 mm, 31cm	1

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5	Rochard Abdominal Retractor 48x120mm, 31cm	1
6	Rochard Abdominal Retractor 48x135mm, 31cm	1
7	Rochard Abdominal Retractor 48x155mm, 31cm	1
8	Rochard Abdominal Retractor 80x105mm, 31cm	1
9	Rochard Abdominal Retractor 80x120mm, 31cm	1
10	Rochard Abdominal Retractor 80x155mm, 31cm	1
11	Rochard Abdominal Retractor 100x100mm, 31cm	1
12	Rochard Abdominal Retractor 100x105mm, 31cm	1
13	Rochard Abdominal Retractor 100x120mm, 31cm	1
14	Rochard Abdominal Retractor 100x155mm, 31cm	1
15	Rochard Abdominal Retractor 150x150mm, 31cm	1

2. LAPAROSCOPIC HAND INSTRUMENTS

- 1. **Basic Laparoscopic Instruments set.** 1set
- 2. **Retractors, S-shaped,** 2pieces set. 1set
- 3. **KOH Macro Needle Holder** with tungsten carbide insert, ergonomic pistol handle with disengageable ratchet, ratchet position left, jaws curved to left, size 5mm, length 33cm, for use with suture material size 0/0 to 7/0. 1Nos.
- 4. **Applicator** for endo-ligature of bleeding vessels and for application for the 3mm needle holder. 1Nos.
- 5. **BERCI Fascial closure instrument** for subcutaneous ligature of trocar wound. 1 Nos.
- 6. **CADIERE coagulating and dissecting electrode,** L-shaped tapered tip, with cm marking with connector pin for unipolar coagulation, size 5mm. 1 Nos.
- 7. **Grasping Forceps, CLERMONT-FERRAND model,** rotating, dismantling with connector pin for bipolar coagulation with especially fine atraumatic serration, fenestrated jaws double-action jaws, size 5mm. 1 Nos.
- 8. **KOCKERLING Knot Tier,** size 5mm, working length 36cm. 1 Nos.
- 9. **Kelly dissecting and grasping Forceps,** rotating with connector pin for unipolar coagulation, size 5mm, length 36cm, double action jaws, with plastic handle without ratchet. 1 Nos.

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10. **KOH Macro Needle Holder**, ergonomic pistol handle with disengageable ratchet, ratchet release on the left side, left curved jaws, with tungsten carbide insert, size 5mm, length 33-36cm. 1 Nos.
11. **Coagulating and dissecting electrode**. L-shaped with connector pin for unipolar coagulation, size 5mm. 1 Nos.
12. **Grasping Forceps**, rotating, with connector pin for unipolar coagulation, size 5mm, length 36cm, atraumatic, single action jaws with plastic handle, without ratchet. 1Nos.
13. **Grasping Forceps**, rotating, with connector pin for unipolar coagulation, size 5mm, length 36cm, atraumatic, fenestrated, single action jaws with plastic handle, without ratchet. 1Nos.
14. **Dissecting and Grasping Forceps**, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-lock connector for cleaning, double-action jaws, right angled, size 5mm and length 36cm. 1Nos.
15. **Scissors insert**, Hook Scissors, single action jaws, size 5mm. 1Nos.
16. **Anvil Grasper**, rotating, size 5mm, length 36cm double action jaws with metal handle without ratchet. 1Nos.
17. **METZENBAUM Scissors**, rotating, dismantling, with connector pin for unipolar coagulation with LUER-lock connector for cleaning, double action jaws, curved, length of jaws 15mm, size 5mm, length 36cm. 1Nos.
18. **Bowel Grasper**, rotating, with connector pin for unipolar coagulation, size 5mm, length 36cm, fenestrated, double action jaws, consisting of plastic handle with MANHES style ratchet. 1Nos.
19. **KOH Needle Holder**, dismantling, ergonomic pistol grip with disengageable ratchet, ratchet release on the right side, straight jaws, with tungsten carbide insert, size 5mm, length 33cm. 1Nos.
20. **Nathanson liver retractor** with Murdoch mechanical arm(containing locking handle and positioning arm) along with retractors for the liver in four sizes (small-45mm, Medium-55mm, Large-75mm and Extra large-95mm). The retractor must be sandblasted to reduce light reflection; resterilizable by steam autoclave or cold sterilant solution. 1Set
21. **Haemolock clip applicator 10 mm** size . It should be compatible with more than one brand. 1Nos.
22. **Haemolock clip applicator 5 mm** size. It should be compatible with more than one brand. 1Nos
23. **Washers** , For 5 & 10 mm cannula and reducers 1Set
24. **Two Way Suction irrigation cannula**, size:5mm&10mm each with special handle with trumpet control for irrigation and suction with silicon tubing. 1Nos
25. **Puncture Needle**, size: 5mm, length 36cm 1Nos
26. **Fan retractor**: Fan retractor with simple opening of the fan by axial movement of the outer sheath, dismantlable and distendable, size: 10mm, length: 36cm 1Nos
27. **Unipolar HF Cable**: Unipolar HF cable suitable to connect with forceps and electrosurgical unit. Must be compatible with Valleylab forcetriad ESU generator FT10. 1Nos.

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- 28. **Bipolar HF Cable:** Bipolar HF cable suitable to connect with forceps and electro-surgical unit. Must be compatible with Valleylab forcetriad ESU generator FT10. 1 Nos.
- 29. **HP Hose:** Suitable high pressure hose pin index to connect the gas to insufflators, length:1.0 meter. 1 Nos.
- 30. **CO2 Cylinder:** D type ---- with hose pipe and regulator and connector, 30 Kg. Carbon Dioxide bottle with pin index connection with wrench 2 Nos.
- 31. **Suitable Autoclavable plastic tray,** double tray for sterilization and storage for hand instruments of minimum 20 hand instruments preferably from OEM. 4 Nos.
- 32. **Sterilization/Disinfection Tray:** Disinfection/Sterilization tray with sieve tray to lift. Size: 27"x7"x5" (LxBxD) 1 Nos.
- 33. **Formalin Chamber:** Formalin Chamber made of Virgin Acrylic 4.5mm thickness; size: 26"x8"x8" (LxBxH). 1 Nos.
- 34. The laparoscopic set and laparoscopic hand instruments should be from one single manufacturer for better compatibility.

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