HSCC/Medical Equipment/SJH Date: 24th Jan. 2017

AMENDMENT-III

Ref.: IFB No. HSCC/SJH/Medical Equipment/2016/25 Dated 23.12.2016

Sub.: Procurement of Medical Equipment for New Emergency Block & Super-Specialty Block at Safdarjung Hospital, New Delhi.

The bid submission date extended from 24.1.2017 to 31.01.2017 for item No. 1, 2, 3, 4, 5, 8, 9, 10 & 11 and Pre bid queries is being examined for item no. 1 & 2.

Item No. 4 HOLTER MONITORING SYSTEM

Description of Function: Holter System is used to document ECG evidence of arrhythmia
Technical Specifications: Monitor system specifications:

1. The system should have simultaneous and continuous acquisition of true 12 channels data for 24 Hrs, with facility to display / print 12 lead ECG at any point of time.
2. **Existing As :** Should have beat to beat review of complete 12 lead presentations and all arrhythmia and ischemic events. It should also be capable of analyzing 3 lead using the same recorder.

Amended as : Should have beat to beat review of complete 12 lead presentations and all arrhythmia and ischemic events. It should also be capable of analyzing 3 lead using the same software.(3Lead recorder optional –price to be quoted separately)

3. Should employ multiple analysis such as retrospective, and bi-directional superimposition mode for at least two leads.
4. Should have Heart Rate variability, ST analysis and QT analysis including QT dispersion performed on all the 12 leads.

5. **Existing As:** Should have SAECG facility for late potentials.

   Amended as : Point Deleted

6. System should have color coded rhythm analysis for various ventricular and supraventricular events including trend graphs for HR, RR intervals, RR variance, 12 leads ST, SVPB, and VPB.
7. Should provide automatic atrial fibrillation detection. Pacemaker analysis, artrial and Ventricular, capture failure, over sensing, under sensing.
8. Should have facility to re-label /edit templates also merge multiple templates as per users choice.
9. System should have an internal storage of full disclosure (Raw Data) of unlimited patients depending on the size of harddisk. It should be possible to copy / transfer the complete full disclosure Holter data to an external media, such as CD/DVD, etc.
10. The software should have the capability to create final summary report in PDF format for maintaining electronic patient records and integration with Hospital Information System.
11. System should have a Report pre-view capability to allow preparation / editing of final report, including comments, full disclosures and ECG strips. Final report should display and print beat labels above each beat.

12. Should have split screen for simultaneous viewing of Profile and ECG, with the provision of printing of ECG strips.
13. System should have calipers for measurements of amplitude, time and heart rate. Patient Holter data down load/scan time should be less than 90 seconds.
14. Should be provided with latest PC with CD Writer, minimum 17" LCD/TFT monitor and should be able to print on ordinary laser printer. It should work on Windows XP / Window 7 operating system.
15. Original product catalogs with complete technical specifications to be enclosed for main and allied equipments being offered.

Optional:

16. **Existing As :** Software package for risk assessment of sudden cardiac death Short term holter recording **Online help for analysis and tutorials.**

Amended As: Software package for risk assessment of sudden cardiac death Short term holter recording.

Recorder Specifications:

17. Compact, Lightweight, should weigh less than 150 grams including battery and recordable media.
18. Should have graphic display to preview ECG waveform of multiple leads during patient hookup, lead quality (Impedance) check. Lead fail and Low battery indication. Online display of Time while recording.
19. Should be a digital Holter recorder and acquire true 12 lead (beat to beat) as per user choice for 24 hours of patient ECG.
20. Digital recorder should have a sampling rate of 10,000 samples/sec/channel for pacemaker spike detection.

Amended as : Digital recorder should have a sampling rate of 1000 samples/sec/channel for pacemaker spike detection.

21. **Existing As :** Should work on a single AA alkaline/ Lithium battery for complete 48 hours recording.

Amended as : Should work on a single AA/AAA, alkaline/ Lithium battery for complete 48 hours recording.

Quantity:1. Monitor with analayzing software: 2 Nos
2. UPS with battery backup for 30 min for whole system-2 Nos,
3. **Existing as**: Recorder including: 8 Nos each
Amended as : Recorder including: Total 8 Nos with accessories
4. Memory card for acquisition of data for minimum 24 hours: 8 Nos
5. Compatible card reader: 2 Nos
6. Hotler pouch with shoulder strap: 8 Nos
7. Connecting cable and accessories-Eight (8 Nos)
8. Laser Printer: 2 Nos
9. Good quality computer table(Durian/Godrej etc) for the system-2 Nos.

Environmental factors:

1. Shall meet IEC-60601-1-2:2001(Or Equivalent BIS)General Requirements of Safety for Electromagnetic Compatibility. Or should comply with 89/366/EEC; EMCdirective.
2. The unit shall be capable of being stored continuously inambient temperature of 0 - 50deg C and relative humidity
3 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%

Power Supply

1. Power input to be 170-270 V AC, 50Hz fitted with Indian plug.

Standards, Safety and Training

1. Should be US FDA approved product
2. Manufacturer/Supplier should have ISO certification for quality standards.

Documentation

1. User/Technical/Maintenance manuals to be supplied in English.
2. Certificate of calibration and inspection.
3. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
4. List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
5. List of important spare parts and accessories with their part number and costing.

H. Other requirements

Model should be latest gereration.
Should have local service facility.
Existing As : Comprehensive warranty for 5 years and AMC/CMC for next five years.

Amended as : Comprehensive warranty for 5 years and CMC for next five years.

Availability of spares to be ensured for minimum 10 years period

Demonstration to be given before approval, if required. And also working demonstration after installation is must.

Item No. 5 Spine OT Table

Fully radiolucent modular table for spinal surgery. Should be versatile for lateral positioning, prone and supine of all types of cervical, dorsal and lumbar spine surgeries. Anterior and posterior approach by 180 ° / 360 ° rotating of patient on table top. C- Arm compatible offering free unhindered movement on the C- Arm. Battery Operated, Remote Controlled. The mechanism of

operating table should be completely oil free motor driven. Should have interchangeable and replaceable table tops for specific surgery procedures.

Dimensions and limits:

1. Patient maximum safe working load : 150 kg or more.
2. Table height : 650 mm to 1000 mm & above
3. Position for Trendelenburg / Anti Trendeleburg
4. Lateral Tilt : 20 -25 °

The table must come with the following equipment's and accessories :

1) Radiolucent Table Top
2) Centrally locking castors
3) Display units should be provided
4) Patient Chest Pad – 2
5) Cervical traction Vector – 1 set
6) Universal Side Rail adaptor – 2
7) Cervical Management Base Unit – 1
8) Anterior Extension Positioner / Supine Positioner Pad – 1 set
9) Skull Clamp – Aluminium – 1
10) Medical pillow for positioning
11) Universal Clamp / Socket – 2
12) Wilson Frame Cover in Silicon – 1
13) Lateral Arm Board set with Pads – 1 set
14) Cross Arm support with Pads – 1
15) 3 piece Lateral Positioner / brace along with 2 side Rail Clamps / Socket – 1 set
16) Mayfield / Doro adaptor with skull clamp with poistioner
17) Attachment with pad for paediatric patients
18) Body positionors for probe position including lap supports
19) Safety straps to be provided
20) Equipment Cart – 1
21) Rates of all consumables if any to be freezed for 5 years, and to be quoted in tender document.
22) European CE & USFDA approved
23) Physical demonstration (if required)
24) Warranty 2 years + CMC 5 years
25) L1 will include CMC cost also.
26) Preventive maintenance every 3 months with log book entry
27) Manufacturer / Principal should have service centre & service engineers in Delhi/ India to provide service 24x7.
28) Spares parts should be available for 10 years
29) Should have installation at minimum two centres (Govt or Private) and should submit installation and performance certificate.

Item S.No.08: Laparoscopic Surgical Instruments

The following all the amended specification of 1Set of Laparoscopic Instruments. (The total requirement is of 6 Sets.)

Tender Specification – Original	**Final Amended Specification – After Pre-bid meeting/representation.**
The system should be truly Digital HDTV endoscopic video camera. The system should have the maximum Resolution of 1920 X 1080 pixels, progressive scan and the consistent use of 16: 9 formats for Input & Output to guarantee genuine HDTV. **A . Full High Definition up Systems will consist of:** 1) Full HD Video Image Processor -1no 2) 3 Chip CCD / CMOS Full HD Camera Head -1no 3) Powerful LED/ 300W Xenon Light Source for better illumination 4) 26" Full HD Medical Grade Monitor-1no 5) Telescope Autoclavable- 1no 6) Light Guide Cable-1no 7) High Flow Insufflator- 20 Liters -1no 8)Trolley /Video Cart -1no 9)Suction-Irrigation unit - 1no 10)Carbon Dioxide Cylinder- 2no 11)Hand Instruments & Other Accessories 12)Accessories, spares and consumables	The system should be truly Digital High definition endoscopic system. The system should have the maximum Resolution of 1920 X 1080 pixels, progressive scan and the consistent use of 16: 9 formats for Input & Output to guarantee genuine HDTV. **A . Full High Definition Systems will consist of:** 1) Full HD Video Image Processor -1no 2) 3 Chip CCD / 3 Chip CMOS Full HD Camera Head -1no (autoclavable preferred). At least should be immercible in disinfectant solution. It should have optical zoom lens technology 3) Powerful 300 W LED/ 300W Xenon Light Source for better illumination – 1no 4) 26" Full HD Medical Grade Monitor-1no 5) High definition Telescope preferably Autoclavable- 1no -each of 10mm 0 and 30 degree, 5mm 0 and 30 degree 6) Light Guide Cable-1no 7) High Flow Insufflator- 40 Liters and above -1no 8)Trolley /Video Cart -1no 9)Suction-Irrigation unit - 1no 10)Carbon Dioxide Cylinder- 2no 11)Hand Instruments & Other Accessories 12)Accessories, spares and consumables
1) **Full HD Video Image Processor**: Should have following specification: • A full high definition processor should have resolution of 1920x1080 pixels. • Should have special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions, Or Optical image enhancement to view the capillary vessels and fine patterns in the superficial layer mucosa for early detection and recurrence of lesions. • Should have a USB slot so as to take still pictures of Endoscope images.	1) **Full HD Video Image Processor**: Should have following specification: • A full high definition processor should have resolution of 1920x1080 pixels with progressive scan technology in camera system. • Should have special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions, Or Optical image enhancement to view the capillary vessels and fine patterns in the superficial layer

• Should have provision for adjusting brightness automatically during to & fro of the scope movements.	mucosa for early detection and recurrence of lesions, or ICG compatible. • Should have a USB slot so as to take still pictures of Endoscope images. It should have 2 digital output ie DVI/HD MI. OR it should have external recorder. • Should have provision for adjusting brightness automatically during to & fro of the scope movements.
2) **3 Chip /CMOS Full HD Camera Head**: Should have following specification: • The full HD camera head should be of Eye piece type & have resolution of 1920x1080 pixels. • Should have Digital / Manual focus function which can be varied seamlessly from coarse to fine image. • Camera Head & coupler should be one piece. • The camera head should /must have integrated (one piece) inbuilt zoom and focus lens/rings to make it fully soak able for sterilization/disinfection.	2) **3 Chip CCD/CMOS Full HD Camera Head**: Should have following specification: • The full HD camera head should be of Eye piece type & have resolution of 1920x1080 pixels. • Should have Digital / Manual focus function which can be varied seamlessly from coarse to fine image. • Camera Head & coupler should be one piece integrated/or with C Mount HD coupler. Separable C Mount coupler along with the camera head is acceptable. • The camera head should /must have integrated (one piece) inbuilt zoom and focus lens/rings to make it fully soak able for sterilization/ disinfection. C Mount coupler along with the camera head is acceptable.
3) **Powerful LED Or300W Xenon Light Source**: Should have following specification: • A Powerful **LED Or 300W Xenon Light Source** • Automatically adjust light intensity to achieve ideal illumination. • Should have special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions. • Colour temperature of at least 5800 K • Manual and automatic adjustment of light intensity • Brightness control to be regulated manually or automatically via the output signal of a video camera • Lamp life 500 hrs or more • Display of lamp life/Bulb usage meter warning light • Standby mode with emergency lamp with visual indicator • Electrical specifications	3) **Powerful 300W LED Or300W Xenon Light Source**: Should have following specification: • A Powerful 300W **LED Or 300W Xenon Light Source** • Automatically adjust light intensity to achieve ideal illumination. • Should have special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions, or ICG based function should be available. • Colour temperature of at least 5800 K • Manual and automatic adjustment of light intensity • Brightness control to be regulated manually or automatically via the

a. Power supply voltage: 100-240 VAC b. Power frequency: 50-60Hz • The light source should comply with IEC 60601-1, belong to Class II a with CE mark	output signal of a video camera • Lamp life 500 hrs or more for Xenon bulb • **Deleted** • **Deleted** • Electrical specifications a. Power supply voltage: 100-240 VAC b. Power frequency: 50-60Hz • The light source should comply with IEC 60601-1, belong to Class II a with CE mark
4) **26" Full HD Medical Grade Monitor:** Should have following specification: • 26 inch full HD LCD with LED backlit monitor with high resolution 1920x1080 • Aspect ratio 16:9 • Should have multi -modality display compatibility, including Picture-in-Picture for various image size combinations. • Should have eco -friendly consumption by low power consumption, various powers saving mode, lightweight and thin body. • Should have advance Image Multiplier Enhancer to enhance image quality. • System should offer 2 x DVI-D output, 2 x 3G/HD SDi output • Should have 2x DVI – D input and 2 x 3G/HD SDiinput .	4) **26" Full HD Medical Grade Monitor:** Should have following specification: • 26 inch full true HD Medical Grade Monitor with LED backlit with high resolution 1920x1080 • Aspect ratio 16:9 • Should have multi -modality display compatibility, including Picture-in-Picture for various image size combinations. • Should have eco -friendly consumption by low power consumption, various powers saving mode, lightweight and thin body. • Should have advance Image Multiplier Enhancer to enhance image quality. • System should be dual channel digital input and output DVI/ HDMI • **Deleted**
5) **Telescope**: Should have following specifications: • 10mm, 0 &30 degree – 1No each (approx. 30-35 cm long) • 5mm, 0 &30 degree – 1No each (approx. 27-30 cm long) • Completely distortion free. • HD Optics for better contrast & color reproduction. • Large field of view and depth of focus. • Fully Autoclavable type. • Color coded.	5) **Telescope**: Should have following specifications: • 10mm, 0 &30 degree – 1No each (approx. 30-35 cm long) • 5mm, 0 &30 degree – 1No each (approx. 27-30 cm long) • Completely distortion free. • HD Optics for better contrast & color reproduction. • Large field of view and depth of focus. • Fully Autoclavable type preferably. • Color coded. • Telescope optic should be compatible to FULL High Definition camera for better contrast & color reproduction.

6) **Light Guide Cable** • It should have High resistance protection against mechanical and thermal stress • It should have small bending radius for comfortable use • It should be 3 Meter or more in Length • Should be ROHS compliant.	6) **Light Guide Cable** • It should have High resistance protection against mechanical and thermal stress • It should have small bending radius for comfortable use • It should be 3 Meter or more in Length • Should be European CE/USA-FDA compliant.
7 **High Flow CO2 Gas Insufflator unit** – 20L minute minimum • Should be digital, microprocessor controlled & automatic type • Large digital display on front panel for status checking • Powerful Insufflation flow rate of 20 L/Min required. • Automatic feedback control for any malfunction.	7 **High Flow CO2 Gas Insufflator unit** – 40L/per minute or more • Should be digital, microprocessor controlled & automatic type • Large digital display on front panel for status checking • Powerful Insufflation flow rate of 40 L/Min or more required. • Automatic feedback control for any malfunction.
8) **Trolley (video cart) should be supplied for the system** • Made of Stainless Steel/ Epoxy coated metal with minimum 4 shelves. • Portable on 4 antistatic dual castors, 2 with locking brakes • Should have minimum 4 shelves • Should have storage for C02 gas bottle holder • Should be from OEM • Trolley should be able to hold monitor with tilt and swivel accordingly. • Should have anti- static strong wheels	8) **Trolley (video cart) should be supplied for the system** • Should be from original equipment manufacturer (OEN) and should be imported • Made of Stainless Steel/ Epoxy coated metal with minimum 4 shelves. • Portable on 4 antistatic dual castors, 2 with locking brakes • Should have minimum 4 shelves • Should have storage for C02 gas cylinder holder or portable separate holder. • Should be from OEM • Trolley should be able to hold monitor with tilt and swivel accordingly. • Should have anti- static strong wheels
9) **SUCTION-IRRIGATION UNIT :** • Controlled suction and irrigation unit with flow rate of at least 11/min. • Irrigation pressure control between 0-400 mm Hg, preferably by roller pump. • Suction pressure control between 0.75 bar.	9) **SUCTION-IRRIGATION UNIT :** • Controlled suction and irrigation unit with flow rate of at least 1L/min. • Irrigation pressure control between 0-400 mm Hg, preferably by roller pump /compact pump.

• Control from control panel and /or foot pedal • Main unit with digital display • Overflow protection on suction bottles • Accessories should include silicone tubing set with reusable pressure domes, bacterial filter and suction bottles with cap (minimum 5 ltrs.)	• **Deleted** • Control from control panel and /or foot pedal • Main unit with digital /manometer display • Overflow protection on suction bottles • Accessories should include silicone tubing set with reusable pressure domes, bacterial filter and suction bottles with cap (minimum 5 ltrs.)
10) **CARBON DIOXIDE CYLINDER - TWO** Two large size cylinders with required regulators and connecting pipe to the insufflators with pressure gauze.	10) **CARBON DIOXIDE CYLINDER - TWO** Two large size cylinders with required regulators and connecting pipe to the insufflators with pressure gauze. Minimum B type 20Kg capacity with separate mobile stand for it. Indian make is acceptable.

11) **HAND INSTUMENTS & OTHER ACCESSORIES**				11) **HAND INSTUMENTS** should be made of plastic/metallic handle			
S.N	**Instrument**	**Specification**	**Qty**	**S. N**	**Instrument**	**Specification**	**Qty**
1.	Reusable Veress Pneumoperitoneu m Needle	Spring loaded Length – 10cm Blunt style Luer lock - 15 cm	02 02	1.	Reusable Veress Pneumoperito neum Needle	Spring loaded Length – 10-12cm Blunt stylet Luer lock - 15 cm	02 02
2	Reusable Trocar :- 5mm	Multifunctional valve, insufflations stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavable	06	2	Reusable Trocar :- 5mm	Multifunction al valve/flap valve, insufflations stopcock and smooth sleeves, pyramidal tip,	08

						length (10.5cm), autoclavable	
3	Reusable Trocar :- 10/11 mm	Multifunctional valve, insufflations stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavable	05	3	Reusable Trocar :- 10/11 mm	Multifunctional valve/flap valve, insufflations stopcock and smooth sleeves, pyramidal tip, length (10.5cm), autoclavable	05
4	Reusable Trocar :- 5mm	Multifunctional valve, insufflations stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavable	02	4	Same as point no. 2		
5	Reusable Trocar :- 13.5mm	Multifunctional valve, insufflations stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavable	01	5	Reusable Trocar :- 13.5mm	Multifunctional valve, insufflations stopcock and smooth sleeves, pyramidal tip with safety outlet hole near tip, length (10.5cm), autoclavable, size 13 to 14mm	02
6	Two ways Suction and Irrigation cannula	a- Size 5mm, length 32-38cm, used with suction and irrigation handle and handpiece with stopcock b- Size 10 mm, length 32-38 cm	01 01	6	Two ways Suction and Irrigation cannula	a- Size 5mm, length 32-38cm, used with suction and irrigation handle	01 01

						and handpiece with stopcock Size 10 mm, length 32-38 cm	
7	Tissue Grasping forceps – toothed 2x3 teeth	Double action jaws of 20-23 mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchets, autoclavable	01	7	Tissue Grasping forceps – toothed 2x3 teeth	Double action jaws of 18-24 mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchets, autoclavable	01
8	Tissue Grasping forceps – toothed 2x3 teeth	Single action jaws of 30-35 mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchets, autoclavable	01	8	Tissue Grasping forceps – toothed 2x3 teeth	Single action jaws of 28-35 mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchets, autoclavable	01
9	Maryland forceps	Double action jaws with size 14-16 mm, rotating with connector pin for unipolar coagulation, size 5mm,	02	9	Maryland forceps	Double action jaws with size 14-18 mm,	02

		length 33-36cm, dismantling facility, plastic handles without ratchets, autoclavable				rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchets, autoclavable	
10	Grasping forceps	Double action jaws, spoon shaped with multiple teeths of jaw length 18-23 mm and rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchets, autoclavable	01	10	Grasping forceps	Double action jaws, spoon shaped with multiple teeths of jaw length 18-30 mm and rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchets, autoclavable	01
11	Dissecting and Grasping forceps – Alligator type	Double action jaws, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchets, autoclavable	01	11	Dissecting and Grasping forceps – Alligator type	Double action jaws, rotating with connector pin for unipolar coagulation, size 5mm, length 33-	01

						36cm, dismantling facility, plastic handles with ratchets, autoclavable	
12	Dissecting and Grasping forceps	Single action jaws, with dolphin nose tip of 16-20 mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchets, autoclavable	01	12	Dissecting and Grasping forceps	Single action jaws, of 16-20 mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchets, autoclavable	01
13	Grasping forceps Atraumatic – Reddick Olsen type	Double action jaws, with fine serrations on jaw length 12-18 mm and rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchets, autoclavable	01	13	Grasping forceps Atraumatic – Reddick Olsen type	Double action jaws, with fine serrations on jaw length 12-18 mm and rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without	01

						ratchets, autoclavable	
14	Grasping forceps – Fenestrated	Single action straight jaw of 24-26mm length with fine serrations and fenestration, rotating, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable	01	14	Grasping forceps – Fenestrated	Single action straight jaw of 24-26mm length with fine serrations and fenestration, rotating, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable	01
15	Grasping forceps – Fenestrated	Single action curved jaws of 35-40mm length with fine serrations and fenestration, rotating, size 5mm, length 43-46cm, dismantling facility, plastic handles with ratchet, autoclavable	01	15	Grasping forceps – Fenestrated	Single action curved jaws of 35-40mm length with fine serrations and fenestration, rotating, size 5mm, length 43-46cm, dismantling facility, plastic handles with ratchet, autoclavable	01
16	Babcock Grasping forceps- (5 mm)	Double action jaws, atraumatic fenestrated, rotating, size 5mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable	01	16	Babcock Grasping forceps- (5 mm)	Double action jaws, atraumatic fenestrated, rotating, size 5mm, length	01

						33-36cm, dismantling facility, plastic handles with ratchet, autoclavable	
17	Babcock Grasping forceps- (10 mm)	Double action robust jaws with large atraumatic gripping surface, rotating, size 10mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable	01	17	Babcock Grasping forceps- (10 mm)	Double action robust jaws with large atraumatic gripping surface, rotating, size 10mm, length 33-36cm, dismantling facility, plastic handles with ratchet, autoclavable	01
18	Dissecting and Grasping Forceps	Single action, atraumatic, fenestrated, curved jaws of length 25-28mm, rotating, size 5mm, length 33-36cm, dismantling type, plastic handles with ratchet, autoclavable	01	18	Dissecting and Grasping Forceps	Single action, atraumatic, fenestrated, curved jaws of length 25-30mm, rotating, size 5mm, length 33-36cm, dismantling type, plastic handles with ratchet, autoclavable	01
19	Dissecting Forceps- Right Angled	Double action jaws, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchet, autoclavable	01	19	Dissecting Forceps- Right Angled	Double action jaws, rotating with connector pin for unipolar coagulation,	01

						size 5mm, length 33-36cm, dismantling facility, plastic handles without ratchet, autoclavable	
20	Fan shaped retractor	Rotating with 4-5 blades, size 5mm, length 33-36cm, dismantling facility	01	20	Fan shaped retractor	Rotating with 4-5 blades, size 5mm, length 33-36cm, dismantling facility. other makes European CE also acceptable including Indian	01
21	Hook Scissors	Double action jaws, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, autoclavable	02	21	Hook Scissors	Double action jaws, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, autoclavable	02
22	Rotating Metzenbaum Scissors	a- Double action jaws of length 14-16mm, rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, autoclavable b- Insert of Metzenbaum scissors	02	22	Rotating Metzenbaum Scissors	a- Double action jaws of length 14-16mm, rotating with connector	02

			02			pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility, autoclavable b- Insert of Metzenbaum scissors	02
23	Bipolar coagulating forceps	Wide jaws for dissection, grasping large vessels, size 5mm, length 33-36cm fenestrated. Jaws with robust hinge and 360 degree rotational, ring handles, can be completely disassembled and a cleaning port, autoclavable	01	23	Bipolar coagulating forceps	Wide jaws for dissection, grasping large vessels, size 5mm, length 33-36cm fenestrated. Jaws with robust hinge and 360 degree rotational, ring handles, can be completely disassembled and a cleaning port, autoclavable	01
24	Spoon Forceps	10 mm size, without ratchet	01	24	Spoon Forceps	10 mm size, without ratchet	01
25	Reusable Hem-o-lock clip applicator	10 mm size	01	25	Reusable Hem-o-lock clip applicator	Reusable Hem-o-lock clip applicator - 10 mm size. Other makes European	01

						CE/FDA also acceptable	
26	Bipolar coagulating forceps (Only Insert)	Maryland type jaw of 18-20 mm length, and 34-36cm long to fit into the other part of No. 23, autoclavable	01	26	Bipolar coagulating forceps (Only Insert)	Maryland type jaw of 18-20 mm length, and 34-36cm long to fit into the other part of No. 23, autoclavable	01
27	Needle Aspirator	Size 5mm, length 30-36 cm, Needle diameter of 1.5-2mm	01	27	Needle Aspirator	Size 5mm, length 30-36 cm, Needle diameter of 1.5-2mm	01
28	Needle holder (Disengageable, coaxial type)	Size 5mm, tungsten carbide tip, straight handle with ratchet, single moving with curved tip to left, length 33-36cm.	01	28	Needle holder (Disengageable, coaxial type)	Size 5mm, tungsten carbide tip, straight handle with ratchet, single moving with curved tip to left, length 33-36cm. Other makes European CE/US FDA also acceptable	01
29	Needle holder insert (straight type)	Size 5mm, tungsten carbide tip, single moving straight jaws, length 33-36cm.	01	29	Needle holder insert (straight type)	Size 5mm, tungsten carbide tip, single moving straight jaws, length 33-36cm.	01
30	Extracorporeal knot pushers	Closed Eye type, length 28-32cm, size 3mm	01	30	Extracorporeal knot pushers	Closed Eye type, length 28-32cm, size	01

						3mm	
31	Endoloop applicator	To fit into trocar size of 6 mm	01	31	Endoloop applicator	To fit into trocar size of 6 mm	01
32	Clip Applicator – Medium Large	Rotatable, provision for locking the shaft conveniently, 10mm, compatible with clip LT 300	01	32	Clip Applicator – Medium Large	Rotatable, provision for locking the shaft conveniently, 10mm, compatible with clip LT 300	01
33	Clip Applicator - Large	Rotatable, provision for locking the shaft conveniently, 10mm, compatible with clip LT 400	01	33	Clip Applicator - Large	Rotatable, provision for locking the shaft conveniently, 10mm, compatible with clip LT 400	01
34	Hassan cone	Adaptable to 10mm trocar	01	34	Hassan cone	Adaptable to 10mm trocar	01
35	Reduction Sleeves / Extractors	From 10/ 11 mm to 5mm, metallic	01	35	Reduction Sleeves / Extractors	From 10/ 11 mm to 5mm, metallic Other makes European CE/FDA also acceptable	01
36	Reducers	From 10/ 11 mm to 5mm	03	36	Reducers	From 10/ 11 mm to 5mm	03
37	L - Hook	Size 5mm, length 33-36cm with pin for cautery	02	37	L - Hook	Size 5mm, length 33-36cm with pin for cautery	02

38	J - Hook	Size 5mm, length 33-36cm	02	38	J - Hook	Size 5mm, length 33-36cm	02
39	Spatula	Size 5mm, length 33-36cm with pin for cautery	01	39	Spatula	Size 5mm, length 33-36cm with pin for cautery	01
40	Fascia closure instrument	Size 2.8mm, length 17cm with single action jaw	01	40	Fascia closure instrument	Size 2.8mm, length 17cm with single action jaw. Other makes European CE/FDA also acceptable	01
41	High Frequency Cord	For 5mm & 10mm hand instruments with Monopolar Electrodes	02 each	41	High Frequency Cord	For 5mm & 10mm hand instruments with Monopolar Electrodes	02 each
42	Washers	For 5 & 10 mm cannula and reducers	10 piece each	42	Washers	For 5 & 10 mm cannula and reducers	10 piece each
43	Fibreoptic Light cables	With straight connectors of 4.8mm diameter and 250cm long	01	43	Fibreoptic Light cables	With straight connectors of 4.8mm diameter and 250cm long	01
44	Fibreoptic Light cables	With straight connectors of 4.8mm diameter and 300cm long	01	44	Fibreoptic Light cables	With straight connectors of 4.8mm diameter and 300cm long	01
45	Light Adaptor	Angled 90 degree, diameter 4.8mm, free rotatable, to connect with	01	45	Light Adaptor	Angled 90 degree,	01

		standard telescopes				diameter 4.8mm, free rotatable, to connect with standard telescopes	
46	Container systems: Metal & Plastic	For sterilization and storage of telescopes, hand instruments and other accessories of different sizes.	03	46	Container systems: Metal & Plastic	For sterilization and storage of telescopes, hand instruments and other accessories of different sizes. Indian/European CE & FDA also acceptable	03
47	Bipolar HF connecting cable		02	47	Bipolar HF connecting cable		02
48	Unipolar HF cables		02	48	Unipolar HF cables		02
49	Hydatid suction cannula		01	49	Hydatid suction cannula	Indian makes also acceptable	01
50	Cleaning Brush	Length 35cm, 0.0-7mm	02	50	Cleaning Brush	Length 35cm, 0.0-7mm	02
51	Cleaning Brush	Length 35cm, 0.0-2.5mm	02	51	Cleaning Brush	Length 35cm, 0.0-2.5mm	02
52	Cleaning Brush	Length 50cm, 0.0-11mm	02	52	Cleaning Brush	Length 50cm, 0.0-11mm	02
53	Cleaning Brush	Length 50cm, 0.0-7mm	02	53	Cleaning Brush	Length 50cm, 0.0-7mm	02

54	Oil dropper	No 38	02	54	Oil dropper	No 38	02
55	Silicon oil for instruments	Bottle of 50ml	04	55	Silicon oil for instruments	Bottle of 50ml	04
56	Special lubricant for stopcocks		04	56	Special lubricant for stopcocks	Indian /Other makes also acceptable	04
57	Duraglit for polishing metal sheaths and instruments		02	57	Duraglit for polishing metal sheaths and instruments	Indian /Other makes also acceptable	02
58	Formalin chamber	Made of Virgin acrylic 4.5mm thickness, size 26" x 8" x 8" (LxBxH) with three tray for sterilizing lap. set	02	58	Formalin chamber	Made of Virgin acrylic 4.5mm thickness, size 26" x 8" x 8" (LxBxH) with three tray for sterilizing lap. set	02

12**(a) System Configuration Accessories, spares and consumables** • System as specified. But all the items should be of the same manufacturer of International repute only. All electronic devices should have CF protection. • ACCESSORIES:- All possible accessories of the equipment should be quoted. The specific accessory and its quantity will be decided on the basis of actual requirement. • The system should be capable of accepting standard accessories of major international brands, which should be specified and for which suitable adaptor, if required, is to be provided • The codes and rates of all relevant individual accessories should be quoted separately with clear mention of period of validity of rates	12**(a) System Configuration Accessories, spares and consumables** • System as specified. But all the items should be of the same manufacturer of International repute only. All electronic devices should have CF protection. They should all be US FDA/ ECE approved unless otherwise specified. • ACCESSORIES:- All possible accessories of the equipment should be quoted. The specific accessory and its quantity will be decided on the basis of actual requirement. • The system should be capable of accepting standard accessories of major international brands, which should be specified and for which suitable adaptor, if required, is to be provided

	• The codes and rates of all relevant individual accessories should be quoted separately with clear mention of period of validity of rates
12**(b) Environmental factors** • The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90% • The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90% •	12**(b) Environmental factors** • The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90% • The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%
12**(c) Power Supply** • Power input to be 220-240VAC, 50Hz fitted with Indian power-plug • Electronic Voltage corrector/stabilizer of appropriate ratings for power supply to the whole set meeting BIS standards/specifications. (Input 160-260 V and output 220-240 V and 50Hz) • Optional UPS of adequate rating for power supply to the system for 60 minutes.	12**(c) Power Supply** • Power input to be 220-240VAC, 50Hz fitted with Indian power-plug • Electronic Voltage corrector/stabilizer of appropriate ratings for power supply to the whole set meeting BIS standards/specifications. (Input 160-260 V and output 220-240 V and 50Hz) • UPS of adequate rating 2KVA with 60 minute backup for power supply to the system.
12**(d) Standard & Safety** • Should be FDA, CE, UL or BIS approved product • Manufacturer and Supplier should have ISO certification for quality standards. • Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standard) • Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electro medical equipment: IEC-60601-1-2: latest edition or Equivalent BIS) or should comply with 89/366/EEC; EMC- directive as amended • Certified to be compliant with IEC 60601-2-2 Medical electrical equipment part 2-2: particular requirements for the safety of equipment mentioned above – wherever applicable •	12**(d) Standard & Safety** • Should be FDA, CE, UL or BIS approved product • Manufacturer and Supplier should have ISO certification for quality standards. • Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standard) • Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electro medical equipment: IEC-60601-1-2: latest edition or Equivalent BIS) or should comply with 89/366/EEC; EMC- directive as amended • Certified to be compliant with IEC 60601-2-2 Medical electrical equipment part 2-2: particular requirements for the safety of equipment mentioned above – wherever applicable

12**(e) Training** • Comprehensive training for staff of user department and support services till familiarity with the system.	12**(e) Training** • Comprehensive training for staff of user department and support services till familiarity with the system for at least four weeks
12**(f) Warranty & Service** • Comprehensive warranty for 5 years and 5 years Comprehensive Maintenance service after warranty. The cost of CMC must be quoted in the price bid. • Percentage of up time guarantee of the equipment during warranty and CMC period for which commitment is to be given must be specified with acceptance of applicable penalty clauses in case of failure to do so. • Principal manufacturer must have registered service centre in India. After sales service must be provided in the city of installation. In situations requiring service/repair of the unit outside the city of Installation, the expenditure on account of this will have to be borne by the supplier.	12**(f) Warranty & Service** • Comprehensive warranty for 5 years and 5 years Comprehensive Maintenance service after warranty. The cost of CMC must be quoted in the price bid. • Percentage of up time guarantee of the equipment during warranty and CMC period for which commitment is to be given must be specified. • Principal manufacturer must have registered service centre in India. After sales service must be provided in the city of installation. In situations requiring service/repair of the unit outside the city of Installation, the expenditure on account of this will have to be borne by the supplier.
12**(g) Documentation** • Product Literature in original along with that of accessories and indigenous components if any photocopies /computer generated copies are not acceptable • Statement of compliance with tender specifications with clear and unambiguous links to relevant portions of product literature /authentic document, which should be highlighted. Alternatives provided for noncompliant specifications with justification must be described in detail with supporting literature. • Certificate of compliance with standards and approvals stated above • Certificate of manufacturer /principal regarding authorization of service facility provided by the supplier • List of equipment available in the Service centre for proving calibration and routine preventive maintenance support, as per manufacturer documentation in service/technical manual.	12**(g) Documentation** • Product Literature in original along with that of accessories and indigenous components if any photocopies /computer generated copies are not acceptable • Statement of compliance with tender specifications with clear and unambiguous links to relevant portions of product literature /authentic document, which should be highlighted. Alternatives provided for noncompliant specifications with justification must be described in detail with supporting literature. • Certificate of compliance with standards and approvals stated above • Certificate of manufacturer /principal regarding authorization of service facility provided by the supplier

• List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing. • Terms and conditions of warranty and CMC including schedules of visit by service personnel with check list of service to be carried out • Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book. • List of users of quoted model with performance certificate from major hospitals • All the offered should be **USFDA &European CE approved**. • All equipment's should be from the same manufacturer. • The principal Company should have their own Service Centre in Delhi/ NCR • Comprehensive Warranty of all equipment's should be of 5 years and 5 years comprehensive maintenance service after warranty. • Cost of CMC must be quoted in price bid.	• List of equipment available in the Service centre for proving calibration and routine preventive maintenance support, as per manufacturer documentation in service/technical manual. • List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing. • Terms and conditions of warranty and CMC including schedules of visit by service personnel with check list of service to be carried out • Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book. • List of users of quoted model with performance certificate from major hospitals • All the offered should be **US FDA &European CE approved**. • All equipment's should be from the same manufacturer unless otherwise mentioned. • he principal Company should have their own Service Centre in Delhi/ NCR • Comprehensive Warranty of all equipment's should be of 5 years and 5 years comprehensive maintenance service after warranty. • Cost of CMC must be quoted in price bid • All companies should quote their latest model of HD system.

Item No. 9

Existing As : SPECIFICATION FOR OPEN HEART SURGERY INSTRUMENTS SET (CTVS) – 6 SETS

Amended As : SPECIFICATION FOR OPEN HEART SURGERY INSTRUMENTS (CTVS) Six in number

S.No.	Description	Qty
1	B. P. Handle #3 Holds blade 10,11,12,15 – Length – 5" (12.5cm) stainless steel (Matte)	1 no.
2	B. P. Handle #3 Holds blade 10,11,12,15 – Length – 8 3/8" (22.3cm) stainless steel (matte)	1 no.
3	B. P. Handle #4 Holds blade 20 to 25– Length – 5 ¼ " (12.8cm)stainless steel (matte)	1 no.
4	B. P. Handle #7 Holds blade 10,11,12,15 – Length – 6 1/2" (16.2cm)stainless steel (matte)	1 no.
5	Potts Smith Tissue Forceps 1x2 teeth serrated tips	2 nos.
6	Cushing forceps, sharp dissecting end, Gutsch handle 7"(17.6cm) – 1x2 teeth	2 nos.
7	Yankauer suction tube length – 11 ½" (28.9cm)	2 nos.
8	Cooley sump suction tube 13"(32.3cm) Should be entire tube removal from handle 7.5mm wide tip	2 nos.
9	Thoracic dissecting forceps length 8 ¼" (20.7cm)D curved debakey jaw	2 nos.
10	Mixter forceps petit point, right angled length 7 ¼" (18.1cm), full jaw serrations	2 nos.
11	Blunt Hooks – 2mm round tip 7" (17.5cm)long	2 nos.
12	Allis willauer tissue forceps 5x6 teeth, 10"(25.1cm) long	4 nos.
13	Tube occluding forceps with U shaped guard 5 ½" (13.7cm) long	12 nos.
14	Tube occluding forceps with U shaped guard 7 ¼ " (18.1cm) long	12 nos.
15	Tube occluding forceps with U shaped guard 8" (20.1cm) long	12 nos.
16	Towel Forceps with non perforating jaws – 4" (9.9 cm)	20 nos.
17	Kocher Forceps – 5 ½"(13.7cm)	12 nos.
18	Rochester – Oschsner Forceps – 8"(20.1cm)	12 nos.
19	Petit Point – Mosquito Forceps – 6" (15cm) long straight	20 nos.
20	Heiss Artery Forceps 8" (20.1cm) Straight	2 nos.
21	Woodward Thoracic Artery Forceps – 8 ¾"(21.8cm) Slightly curved	1 no.
22	Chest Tube passer length 9 ¾"(24.6cm) with ratchet	1 no.
23	Foerster sponge holding forceps 9 ½"(23.9cm) straight serrated	2 nos.

24	Wire cutter (Side cutting) tungsten carbide jaw edge 7"(17.5cm) maximum capacity – 0.59" (1.4cm)	1 no.
25	Allison lung retractor large – 12 ½"(31cm) , 2 1/8"(5.3cm) wide	1 no.
26	Allison Lung retractor small – 10 ½"(26.4cm), 1 ½"(3.6cm) wide	1 no.
27	Cooley arterial valve retractor – Right angle width 7/8"(2cm), depth – 1- 7/8"(5cm)	1 no.
28	Cooley arterial valve retractor right angle width – 1 ½"(3.6cm), Depth – 2"(5cm)	1 no.
29	Cooley Arterial valve retractor – left angle width-2"(5cm), Depth – 1"(2.4cm)	2 nos.
30	Morse sternal retractor Child size, spread 6"(15cm), arm length – 4 7/8"(12cm), Blade – 7/8"(2cm) x ¾"(0.75cm) deep	1 no.
31	Morse sternal retractor Adult size spread – 9"(22.7cm), arm length – 5 ¾"(14.8cm) blade – 1 1/8"(4.8cm) x 1"(2.4cm) deep	1 no.
32	Favaloro Morse sternal retractor Adult Spread – 9"(22.7cm), Arm Length – 6"(15cm), Blade – 1 1/8"(4.8cm) x 1 ½"(3.6cm) deep	1 no.
33	Castaneda Sternal retractor arms & blades – aluminum, ratchet bar Stainless steel Neo born size , spread – 2 ½"(6.35cm), Arm length-2 1/8"(5.4cm), Blade – 1 ¼"(3.17cm) x 1/2"(1.2cm) deep	1 no.
34	Castaneda Sternal retractor arms & blades – aluminum ratchet bar Stainless steel Infant size –spread – 3 ½"(8.9cm), Arm length- 3 1/8"(3.92cm), blade – 1 ¾"(4.44cm) x 5/8"(0.62cm) deep	1 no.
35	Castaneda Sternal retractor arms & blades – aluminum ratchet bar Stainless steel Child size spread size – 4 1/8"(10.5cm), Arm length -5"(12.7cm), blade 2 3/8"(6.01cm) x 7/8(0.9cm) deep	1 no.
36.	FINOCHIETTO Rib spreader , curved arm, Child size- Spread 5-3/8"(13.4cm). Arm length -5 1/4"(13.3cm), blade 1-3/4"(4.5cm) x 1-5/8"(4cm) deep	1 No.
37	FINOCHIETTO Rib spreader , curved arm, Adult size- medium Spread 7 -7/8"(19.8cm). Arm length -7-1/4"(18.3cm), blade 2-1/2"(6cm)x 2-1/8"(5.2cm) deep	1 no.
38	FINOCHIETTO Rib spreader , curved arm, Adult size- Large Spread 7 -7/8"(19.8cm). Arm length -7-1/4"(18.3cm), blade 2-1/2"(6cm)x 2-7/8"(7cm)deep	1 no.

39	Russian Tissue forceps -8”(20.32cm) long	1 no.
40	Russia tissue forceps 10”(25.4cm) long	1 no.
41	SATINSKY Vena cava clamp, length 9-3/4”(23.6cm), jaw length-2 “(5cm), depth 3/8”(0.93cm) Large	1 no.
42	SATINSKY Vena cava clamp, length 9-3/4”(24.6cm), jaw length-1-3/8”(3.4cm), depth ¼”(0.5cm) Small	1 no.
43	De Bakey Aortic Aneurysm Clamp , 9- ½”(24cm) Debakey serration Jaw length 3-3/8”(8.3cm)	1 no.
44	De Bakey Aortic Aneurysm Clamp , 10-5/8”(26.5cm) Debakey serration Jaw length 3-3/4”(9.3cm)	1 no.
45.	De Bakey Aortic Aneurysm Clamp , 12”(30cm) 2x3 Debakey serration Jaw length 4-3/8”(10.8cm)	1 no.
46	De Bakey Aortic Aneurysm Clamp , 13 1/8”(32.8cm) Debakey serration Jaw 2X3 , length 5-3/8”(13.5cm)	1 no.
47	CUSHING forceps, semi sharp dissecting end, GUTSCH handle, tungsten carbide Tip – 7”(17.5cm) long angled	2 no.
48	DeBakey Forceps – 2mm Tip, length 7- ¾”(18.5cm) angled	2 nos.
49	DeBakey Forceps – 2mm Tip, length 9- ½”(24cm) angled	2 nos.
50	Titanium DeBakey forceps , straight – 2mm tip , 9 ½”(24cm) long	2 Nos.
51	Titanium DeBakey forceps , straight – 2mm tip , 7 ¾”(19.5cm) long	2 nos.
52	DeBakey – DIETRICH Vascular Tissue Forceps , Straight, Micro fine serration – 1mm Tip, length – 6”(15cm)	2 nos.

53.	DeBakey – DIETRICH Vascular Tissue Forceps , Straight, Micro fine serration – 1mm Tip, length – 7 ¾”(19.7cm)	2 nos.
54	DeBakey – DIETRICH Vascular Tissue Forceps , Straight, Micro fine serration – 1mm Tip, length – 9- ½”(24cm)	2 nos.
55.	DeBakey – DIETRICH Coronary Artery Forceps , Straight, Micro fine serration – 1.5 mm Tip, length – 6”(15cm)	2 nos.
56.	DeBakey – DIETRICH Coronary Artery Forceps , Straight, Micro fine serration – 1.5 mm Tip, length – 9-1/2”(24cm)	2 nos.
57.	DeBakey forceps – 2mm Tip , straight , length – 6”(15cm)	2 nos.
58.	DeBakey forceps – 2mm Tip , straight , length – 9 ½”(24cm)	2 Nos.
59.	DESMARRES type valve retractor – 7- ¼”(17.8cm), 4mm wide, malleable	1 No.
60.	DESMARRES type valve retractor – 7- ¼”(17.8cm), 8 mm wide, malleable	1 No.
61	DESMARRES type valve retractor – 7- ¼”(17.8cm), 12 mm wide, malleable	1 no.
62	DESMARRES type valve retractor – 7- ¼”(17.8), 15 mm wide, malleable	1 no.
63.	ROSS Aortic Valve retractor – 10”(25.3cm) # 3 Blade ¾”(1.8cm) x 1”(2.4cm)	1 no.
64.	WEITLANER Retractor, Hinged blade 5 ½:”(13.7cm), 3x4 Blunt prong, 17 mm deep	1 no.

65	WEITLANER Retractor, Hinged blade 6 ¼:"(15.5cm), 3x4 Blunt prong, 18 mm deep	1 no.
66.	US Army – Navy Retractor 8 ¼"(20.5cm), double ended blade 5/8"(1.4cm) wide Set of 2	1 no.
67	LAHEY Thyroid Retractor 8"(20cm) blade, 1"(2.4cm) x ¼"(0.5cm) wide	1 no.
68	RECHARDSON Retractor , Loop handle – 9- 1/2"(24cm) BLADE ¾"(2cm) WIDE X 1"(2.4cm) Deep	1 no.
69.	RECHARDSON Appendectomy Retractor , Loop handle – 9-1/4"(23cm) BLADE ¾"(2cm) WIDE X 2"(5cm) Deep	1 no.
70.	DIETRICH Micro Coronary Bulldog clamp, tension – 55gms, Fine serrated Jaws, 5.2 cm length, 10 mm(1cm) angled jaw	2 nos.
71.	DIETRICH Micro Coronary Bulldog clamp, tension – 55gms, Fine serrated Jaws, 5.4 cm length, 12 mm(1.2cm) angled jaw	2 nos
72.	DIETRICH Micro Coronary Bulldog clamp, tension – 55gms, Fine serrated Jaws, 6.0 cm length, 20 mm (2cm) angled jaw	2 nos
73	DIETRICH Micro Coronary Bulldog clamp, strong tension – 180 gms, Fine serrated Jaws, 4.4 cm length, 10 mm (1cm) angled jaw	2 nos.
74	STERNAL Needle holder & wire twister, tungsten carbide jaw , 6mm tip,length-7- ¾"(18.5cm), heavy duty	1 nos.
75	COOLEY BAUMGARTEN STERNAL Needle holder and wire twister, tungsten carbide jaw – 8"(20cm) heavy duty blunt jaw, textured tip	1 no.

76	MAYO-HEGGAR Needle holder-2500 teeth per squire Inch, tungsten carbide jaw, length – 8”(20cm)	4 nos.
77	PETIT- POINT RYDER Needle holder 4000 teeth per squire inch, 12mm, tungsten carbide jaw – 1 mm tip, length – 8”(20cm)	2 nos.
78	PETIT- POINT RYDER Needle holder 4000 teeth per squire inch, 12mm, tungsten carbide jaw – 1 mm tip, length – 9”(22.5cm)	2 nos.
79	Masson Needle holder, tungsten carbide jaw,length- 10 ½”(26.5cm), 2500 teeth per squire inch,	2 nos.
80	SAROT Needle holder, tungsten carbide jaw, length – 7 1/8”(18cm) 2500 teeth per squire inch	2 nos.
81	TUBBS Mitral Valve dilator, maximum blade opening 1- ¾”(4.2cm)	1 no.
82	DeBakey vascular dilator - 7- ½”(18.8cm) , 1.00 mm size	1 no.
83	DeBakey vascular dilator - 7- ½”(18.8cm) , 1.50 mm size	1 no.
84	DeBakey vascular dilator - 7- ½” (18.8cm), 2.00 mm size	1 no.
85	LILLEHEI-POTTS Scissors – 7”(17.5cm) long, curved blade, blunt tip	2 nos.
86	LILLEHEI-POTTS Scissors – 7”(17.5cm) long, curved blade, sharp tip	2 nos.
87	LILLEHEI-POTTS Scissors – 9”(22.5cm) long, curved blade, blunt tip	2 nos.
88	METZENBAUM (NELSON) Scissors , tungsten carbide jaw, length – 9”(22.5cm) curved , bunt tip	2 nos.

89	METZENBAUM (NELSON) Scissors , tungsten carbide jaw, length – 9”(22.5cm) curved , delicate tip	2 nos.
90	METZENBAUM (NELSON) Scissors , tungsten carbide jaw, length – 10”(25cm) curved , bunt tip	2 nos
91	DIETRICH Coronary Artery Scissors, super cut – 7”(17.5cm) length, 13.5 mm(1.4cm) blade, 45 degree angled	1 no.
92	MAYO- HARRINGTON Scissors , length – 9”(22.5cm) , curved	1 no.
93.	MAYO- HARRINGTON Scissors , length – 11”(27.8cm) , curved	1 no.
94.	PSCVD mosquito Artory Curved 9.8cm	3 no.
95.	Nerve Hook Cushing 27cm	2no.

Points to be added :-

1. It should have been made up of pure and good quality German stainless steel.
2. It should have country origin should be mentioned on instruments. It should mention like (“ Made in _____”)
3. It should have Lot Number, Article Number, Company Name emboss on each every instruments.
4. It should be imported and it should have European CE and US FDA certified.
5. It should provide with sterilization container and wire basket, and the container should meet all international standards of quality and approved for steam sterilization procedure of EN 285.2008. as well as it should be from same parent company.
6. Company should have service facility in India & warranty period of 2 years.

- Amendment required for CTVS Instruments.

Name of Equipment:-

1. Existing: SPECIFICATION FOR OPEN HEART SURGERY INSTRUMENTS SET – 6 SETS

   Amended as: SPECIFICATION FOR OPEN HEART SURGERY INSTRUMENTS (CTVS) Six in number.
2. **New Point to be added:-**
   - Bidders are permitted to quote instrument wise.
   - Demonstration is must.

Specification of Blood Gas & Electrolytes Analyzer

Item No. 10

A fully automatic, fast, precise blood gas analyzer with following features:-

1. Measured parameters: pH, PCO2, pO2, Cl, Na, K, Ca, O2 Sat, Hb, Glucose, Lactate.
2. Calculated parameters: Std. pH, pCO2, pO2, CH+, HCO3, Std. HCO3, Hct., BEX, BEecf, BB, O2 content, TCO2, all at patient's temperature
3. Sample size: Not more than 150ul
4. Throughput: 40 samples per hour
5. Readout time: Less than 1 min.
6. Printer: In-built printer for thermal paper
7. Calibration: Automatic in cycle system
8. Display: Digital display on the screen
9. Electrodes: Maintenance free with shelf life not less than 5 year
10. Memory: More than 1000 patients memory
11. Equipment should be reagent based.
12. Participant must have USFDA and European CE Approved.

Item No. 11

REVISED TECHNICAL SPECIFICATIONS FOR HIGH END COLOR DOPPLER FOR NEW EMERGENCY BLOCK, RADIOLOGY DEPARTMENT

Technical Specifications – Premium End, Top of the Line, Color Doppler Ultrasound System with Shear Wave Elastography and Fusion Imaging

1. **System should be State of art, top of the Line Premium End Fully Digital with Broadband Digital Beam Former.**
2. The system design should be compliant with Green Emission Product specification.
3. The system should comply with standards of Environmentally Conscious Products (ECP). Certificate to be attached.
4. US FDA &CE compliant .Also mention year of launch.
5. The system should have high density Beam Former technology and should be able to handle independent processing channel for each receiving information from transducer.
6. The system should have minimum 192 hardware channels and 65000 or more digitally processing channels. Original manufacturing letter to be attached for confirming above channel numbers.
7. The system should perform up to 1000 frames/sec. or more. Also system should support transducers of frequency range from 1-17Mhz.
8. The system should have region specific presets like Adult Abdomen, Pediatric Abdomen, TV/TR, Gyn, Small Parts, Musculoskeletal and vascular presets. All presets should be customized according to the user.

9. The system should have Quick View mode for 2D & CDI Preset selection during exam and minimum 8 sub presets for 2D &CDI Modes.

10. The system panel height should be adjustable according to the user comfort.

11. The Panel should have Swivel and In/Out Control for Maximum User Comfort.

12. The system should have latest generation /pulse subtraction / Pulse Inversion Tissue Harmonic Imaging for better contrast and reduced side lobe artifact.

13. System Should have Receiving End Frequency and Spatial Compound Imaging Technology for reducing Clinical Artifacts and

    i. Compound Imaging Should work in all the Probes
    ii. Compound Imaging should be possible on Color and Doppler Modes .
    iii. Transducers operate in Trapezoid format with and without compound imaging.

14. Multiparametric Image Optimization: The system shall automatically and intelligently optimize key imaging parameters in real-time, maintaining image uniformity across tissue types with minimal adjustments as soon as the transducer is placed on the patient.

15. The system should have 256 gray scales.

16. The System should have 2D and spectral Doppler image optimization with a push of a button and auto-refresh function. Should be compatible with other advanced imaging options.

17. Up to 10X digital zoom should be available, on live, frozen, cine, dual screen images-Preserves full image resolution within the zoom ROI.HD zoom should be available.

18. The System should have THREE active transducer ports or more.

19. The system should display Thumbnails on a Clipboard while scanning to facilitate exams.

    i. The User can select either Bigger Screen only Ultrasound Image or With Thumbnail with Live Ultrasound Images.

20. The system should be Upgradable to User Configurable Protocol for Applications such as OBGYN/ Vascular etc. for system operation. The following automation should include the protocol:

    i. Automatic set up of Imaging Controls & Modes.
    ii. Manual/Automatic steering in B Mode/ CDI/PW Doppler.
    iii. Initiation and auto completion of required measurements etc.

21. The System Should High Dynamic range of 200db or more. Higher Dynamic range will be preferred please specify range.

22. The system should have Power Doppler Imaging mode with directions.

23. The system should have PW Doppler & HPRF mode for all transducers 0.3 to 34 KHz.

24. Specify Color Velocity Scale Selection.

25. Pw Sample Gate selection should be 1mm to 20mm or more.

26. The Minimum Imaging Depth should be 30 cm or more and should be selectable by user.

27. The system should have US FDA approved Real Time Elastography (strain and shear wave) for Liver, thyroid Breast, Prostate Applications. Also the Following feature's Available in the Elastography:

    i. During Elasto mode, Reference 2D Mode should display side by side. After Freeze best cycle selected from cine mode reference of Compression Wave.
    ii. Elastography should be Velocity based, The System should able to measure by ON LINE the Stiffness of Tissue and Compare with Normal Tissue, and Ratio should be calculated between Reference Tissue vs Target Tissue.
    iii. Convex and linear probe and Endocavity Probes Should Support strain elastography for all applications including Prostate Elastography. Necessary Software should be Built In
    iv. Convex and linear probes should offer shear wave elastography for abdominal ,breast,and thyroid etc applications.
    v. System should be able to generate a color coded elastogram with a reference adjustable elasticity scale for each application.
    vi. System should be able to display simultaneously both color coded elastogram and corresponding B-Mode image in real time for performing elastography guided biopsies/FNAC.
    vii. There should be user adjustable elasticity box size with a Display Depth: 0-8cm.
    viii. Elastography quantification should be available with pixel accurate absolute or discreet Elasticity values on all transducers.
    ix. Elastography quantification tool should be able to provide Mean, Max, Median & Min elasticity values of the tissues in both m/s or kPA on all transducers.
    x. System should have integrated report worksheet for Liver elasticity assessment.

30. The system shall provide Color coded stiffness map with 4 color display modes

    Color, size, strain ratio, shear velocity.

    i. Maximum Shear wave velocity 10m/s; Minimum Depth shear-wave imaging should be 16cm; Minimum depth shear-wave quantification should be 8cm.
    ii. System should offer custom tissue imaging to improve lateral and contrast resolution in breast imaging by modifying the speed of sound for fatty breast and adipose tissue.

31. The System should provide a **Volume Navigation Tool** which allows Fusing Real Time Ultrasound Images with Images acquired from other Modalities such as CT & MRI of any make. The Following features should be available for Real Time Fusion Imaging

    i. The Transmitter should be fixed with System with movable arm for Easy Navigation.

ii. The Receiving Sensor should be attached with Convex Probe while performing Fusion Imaging mode.
iii. DICOM Datasets from other modalities can either be retrieved via DICOM Q/R function or (USB / DVD) DICOM media.
iv. Tracking of the Ultrasound transducers movement in space is done via Magnetic sensor system. The strength of the Magnet should be indicated on the system monitor
v. Total Registration of those datasets and real time ultrasound images should be 2 Steps maximum. 1st Step for Angle Synchronization for Magnetic Strength and 2nd Step for Position Synchronization is achieved by using anatomical landmarks.
vi. The Window level of Data set should be adjustable in Ultrasound system.
vii. The system should capable of operating in Biopsy mode while performing Fusion study. The Biopsy line should display on both Fusion and Ultrasound Images.
viii. Fusion Imaging should be possible with at least Convex Probe. Mention additional probe on which fusion is available and price should be quoted separately.(will not be included in calculation of L1)
ix. The system should capable of Contrast imaging in Fusion mode.

32. The System should have **Needle Navigation** which Utilizes Fusion mode and following should be possible:

i. A virtual biopsy line generated using a position sensor (up to 3 lines) is displayed on the screen during ultrasound-guided diagnostic/therapeutic procedures. Deviation of the needle tip from the image plane is displayed in different colors according to the direction of deviation. Smart Fusion can be used in combination.
ii. Ruler with Tip Distance

33. The System Should have advanced **Contrast Package** available.

i. During contrast examination the system should be able to Display Wash In, retention and wash out information in the lesion with Time intensity curves.
ii. The system offer user selectable tint maps to allow enhanced visual conspicuity of contrast agent.
iii. The System should have Contrast Quantification package so that it able to measure the arrival time of contrast agent at any point of time.
iv. The system shall provide a toolbox of at least five contrast imaging technologies:
    a. - detection of the fundamental response of the CM
    b. - detection of the harmonic response of the CM
    c. - agent destruction imaging
    d. - contrast capture imaging
    e. - micro-bubble destruction imaging
v. The system shall offer contrast imaging package with Contrast Harmonic and Quantification.
vi. CPS & CHI Switching Between Contrast Modes:

34. Should offer low MI contrast agent imaging techniques and provides highly sensitive agent detection with outstanding enhancement information System should have Biopsy Enhancement mode for better Needle Insertion and Multiple Enhancement Level Adjustment should be possible.

35 The System should have 3D and live 3D/4D acquisition possible with Volume convex probe.

36. The system should have advanced DICOM Modalities work list

37. **Sophisticated Ergonomics:**

A flexible multi joint arm supports the LCD monitor, allowing appropriate positioning for operations in the standing or sitting posture to be achieved easily.

38. **Monitor:**

i. Monitor should be high resolution, 19" (inch) or more Back Lit LED/ LCD Monitor with 1080 x1080 matrix or more. Please specify resolution range with IPS technology.

39. **Console:**

i. The freely programmable, mode-sensitive 10" or more Color Touch Command Screen which enables direct access to all basic and advanced system controls.
ii. Convenient transducer trays on both sides should put. up to Six transducers within easy reach in any scanning position.
iii. Basic and advanced quantification functions should be activated directly on the programmable console.
iv. All Mode keys concisely arranged with multi-gain controller should enable direct access to all imaging modes.
v. A retractable alphanumeric keyboard should be available to manually enter comments or patient data
vi. Control panel can be moved horizontally and vertically according to user comfort
vii. Integrated gel warmer.

40. **Data management:**

i. A large-capacity minimum 1TB HDD should be provided in the standard configuration, facilitating efficient management of acquired images. Images can be viewed in Image Review Mode. Also cine memory of more than 2000 frames should be available.
ii. Filed images can have output via the USB port (USB Memory or USB HDD) or stored on CD/DVD by Image Management.

iii. Should be able to integrate with the then existing PACS in the institute with no extra cost.

41. **Measurements and Calculations:**

i. Auto measurement should be possible on frozen images and Images Recalled from the Image archive.
ii. The System should have Comprehensive set of Measurements in OB/ Gyn/ Carotid/ Lower Limb/ Upper Limb / Thyroid / Testis / Abdominal Applications
iii. Template customization should be possible.
iv. On Board Report for all Packages – Report transfer to Print Page along with Selected Images will be Printed using normal PC Printer.

42. **Following Probes should be supplied along with system:**

i. Convex Probe with Band width of 1MHz to 6MHz OR MORE with Biopsy Guide for Abdominal applications and Support for Strain and Shear wave Elastography and Fusion with Navigation Application.
ii. Convex volume probe 2-7MHz with 4D package.(including multislice ,MPR, curved VOI, fetal stic)
iii. Linear probe of 5 to 9 MHz with Biopsy guide and should support Strain, Shear wave Elastography and Fusion with Navigation Application.
iv. Linear Probe of 7-17 MHz with strain Elastography.
v. Dedicated Transvaginal Probe with Band width of 4MHz to 9MHz OR MORE with Biopsy Guide and should Support Strain Elastography. (If shear wave elastography is available on this probe quote as optional. Price will not be included for calculation of L1)
vi. Dedicated Trans-Rectal Probe with Band width of 4MHz to 9MHz OR MORE with Biopsy Guide and should Support for Strain Elastography (If shearwave elastography is available on this probe quote as optional. Price will not be included for calculation of L1)
vii. Phased Array probe of 1-5 MHz for Trancranial application.
viii. Pediatric probe convex 3-8 MHz .

43. **ACCESSORIES**

a)Suitable Online UPS with 30 min. backup

b)Dry Chemistry Laser camera of 500dpi with two active trays. should be capable of printing 8x10 inches and 11x14inches (both active)

44. Onsite demonstration of the quoted unit may be asked for

45. **Application Training** engineer should be available for one month continuously and for five month thereafter as and when required after date of installation.

46. **Warranty** Five years complete warranty for the entire equipment, probes and accessories which should include service as well as parts with 98% uptime. In case of downtime exceeding 2% it will be extended by double the down time.

Five years CMC after the expiry of the warranty also to be quoted covering the complete system for which order is placed.

AMENDMENT
COMMERCIAL TERMS & CONDITIONS

For :

Technical Specifications and Standards

6.1 The Goods & Services to be provided by the supplier under this contract shall conform to the technical specifications and quality control parameters mentioned in 'Technical Specification' and 'Quality Control Requirements' under Sections VII and VIII of this document.

For Radiology
The equipment viz. CT Scan, MRI, Digiral Radiography, Digital Radio Fluoroscopy, Ultrasound, X-Ray Machines etc. Should be DICOM 3.0 enabled & complied with HL7 (Health Level 7) Standards. DICOM 3.0 provides reliable protocols for integration of image data between imaging, non-imaging modalities, devices & systems.

For Laboratory Equipment
Equipment should be ASTM (American Society for Testing & Materials) compliant for integration of System Software with Lab. Records & Database.

Above standards are required for interfacing of equipment with PACS (Picture Archiving & Communication System) & HMIS (Hospital Management & Information System) during the computerization of the Hospital.

To be read as:

6.1 The Goods & Services to be provided by the supplier under this contract shall conform to the technical specifications and quality control parameters mentioned in 'Technical Specification' and 'Quality Control Requirements' under Sections VII and VIII of this document.

For Radiology equipment i.e. X-Ray, Ultrasound, MRI & CT-Scan etc.

a. Equipment should be DICOM (Digital Imaging and Communications in Medicine)

enabled DICOM provides reliable protocols for integration of image data between imaging, non-imaging
modalities, devices and systems.

b. Equipment complied with HL7 (Health Level Seven) standards

c. Capable to link with PACS & HMIS. Any Hardware/lock/software license required for interfacing with PACS & HMIS should be supplied with the equipment/device.

2. For Laboratory Equipment/device:

a. Equipment communicates in one of the following ways:

A. TCP/IP
B RS-232
C. USB

Any type of cable/hardware/lock/software/license required for integration with HMIS system should be provided.

Please provide configuration parameters to connect with HMIS successfully.

b. Data accepted/send by the device/equipment should be readable as standard data Type in ANSI C/C++.

c. Comprehensive list of all data structures imported and exported by the device should be documented with examples.

d. API of equipment should be provided.

e. Technical interface specification should be provided.

Above standards are required for interfacing of equipment with PACS & HMIS during the computerization of hospital.

FOR:

SECTION – XIX
AFFIDAVIT/UNDERTAKING

I/ We have read and understood the instructions and the terms and conditions contained in the document. I/We accordingly accept all terms and conditions of the tender enquiry document including the essential conditions specially incorporated in the tender enquiry like terms of terms of

payment, liquidated damages clause, warranty clause, dispute resolution mechanism applicable law. I/ **We confirm that we do not stand deregistered/banned/blacklisted by any Govt. Authorities**. I/ We do hereby declare that the information furnished/ uploaded is correct to the best of my/our knowledge and belief. I/We hereby certify that the prices offered by us in this tender is not higher than the prices we had offered to any other Govt. of India Organisation(s)/PSU(s) during the last one year and shall provide the justification for reasonableness of our offered price whenever asked during evaluation of our submitted bid. I/ We also hereby certify that if at any time, information furnished by us is proved to be false or incorrect; I/ We are liable for any action as deemed fit by the purchaser in addition to forfeiture of the earnest money.

Date: (Signature of the bidder)
NAME & ADDRESS OF THE BIDDER

NOTE: To be submitted on non-judicial stamp paper of Rs. 10/- duly certified by Public Notary

To be Read as:

SECTION – XIX
AFFIDAVIT/UNDERTAKING

I/ We have read and understood the instructions and the terms and conditions contained in the document. I/We accordingly accept all terms and conditions of the tender enquiry document including the essential conditions specially incorporated in the tender enquiry like terms of terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism applicable law. I/ We confirm that we do not stand deregistered/banned/debarred/blacklisted by any Govt. Authorities. I/ We do hereby declare that the information furnished/ uploaded is correct to the best of my/our knowledge and belief. I/We hereby certify that the prices offered by us in this tender is not higher than the prices we had offered to any other Govt. of India Organisation(s)/PSU(s) during the last one year and shall provide the justification for reasonableness of our offered price whenever asked during evaluation of our submitted bid. I/ We also hereby certify that if at any time, information furnished by us is proved to be false or incorrect; I/ We are liable for any action as deemed fit by the purchaser in addition to forfeiture of the earnest money.

Date: (Signature of the bidder)
NAME & ADDRESS OF THE BIDDER

NOTE: To be submitted on non-judicial stamp paper of Rs. 10/- duly certified by Public Notary

Amendment to be issued will be uploaded on websites www.tenderwizard.com/HSCC & www.hsccltd.com.

All other tender terms and conditions remain unchanged.

Medical Superintendent
Safdarjang Hospital & VMMC,
New Delhi.

Submitted for Approval Please :

DM (BME)

DGM(BME)

DGM (Proc.)

GM (Proc.)

CGM