

28-02-2020

**Amendment No - 01****Sub: Amendment to the referred tender enquiry****Ref.: Tender Enquiry Document HITES/PCD/PMSSY-IV/12/CTVS/19-20 dated 31-Jan-2020**

Following changes are being incorporated in the above referred Tender Enquiry Document.

**SECTION VII****Technical Specification**

<b>Tender Page &amp; Para</b>	<b>TENDER SPECIFICATION</b>	<b>READ AS</b>
<b>Item No 01 Instrument Set for Cardio-Vascular &amp; Thoracic Surgery</b>		
Pg 46 1.b	Length 180mm / 7", 0.4 mm x 11 mm straight jaw for suture 8-0 and smaller -1	Length 180mm / 7", 0.4 mm x 11 mm straight jaw for suture 8-0 and smaller <b>-2 nos</b>
Pg 46 1.d, e, f	Length 180mm / 7", 0.6 mm x 11 mm straight jaw for suture 7-0 and smaller -1 Length 210mm / 8 1/4", 0.4 mm x 11 mm straight jaw for suture 8-0 and smaller -1 Length 210mm / 8 1/4", 0.6 mm x 11 mm straight jaw for suture 7-0 and smaller -1	Length 180mm / 7", 0.6 mm x 11 mm straight jaw for suture 7-0 and smaller - <b>2 nos</b> Length 210mm / 8 1/4", 0.4 mm x 11 mm straight jaw for suture 8-0 and smaller <b>-2 nos</b> Length 210mm / 8 1/4", 0.6 mm x 11 mm straight jaw for suture 7-0 and smaller <b>-2 nos</b>
Pg 46	2 RYDER NEEDLE HOLDER Intra Cardiac stainless steel TUNGSTEN CARBIDE / DIAMOND DUST, Ring Handle. a) Length 21 cm / 8", Round Tip 1.9 mm jaw – 2 3 MINI RYDER with round jaw of 1.4 mm, with TC tip a) Length 15 cm / 6" – 2 nos. 4 BOZEMANN FINNOCHIETTO Needle Holder with TC inserts gentle smooth curve at the shaft and curve at the tip a) Length 24 cm -1 b) Length 30cm -1	2 RYDER NEEDLE HOLDER Intra Cardiac stainless steel TUNGSTEN CARBIDE / DIAMOND DUST, Ring Handle. a) Length 21 cm / 8", Round Tip 1.9 mm jaw – <b>4 nos</b> 3 MINI RYDER with round jaw of 1.4 mm, with TC tip a) Length 15 cm / 6" – <b>4 nos.</b> 4 BOZEMANN FINNOCHIETTO Needle Holder with TC inserts gentle smooth curve at the shaft and curve at the tip a) Length 24 cm <b>-2 nos</b> b) Length 30cm <b>-2 nos</b>

Tender Page & Para	TENDER SPECIFICATION	READ AS
Pg 46	<p>10 RING TIP TITANIUM MICRO TISSUE FORCEP, Sapphire / Enhanced needle grip Surface, round handle ring smooth.</p> <p>a) Length 180mm / 7" – 0.5 x 1 mm – 1 No.                      b) Length 180mm/ 7" – 0.5 x 1 -1.3 x 2 mm – 1 No.                      c) Length 210mm - 0.5 x 1 mm – 1No.</p> <p>Delicate Tissue Forceps –                      11 DEBAKEY – GERALD – Atraumatic Tissue Forceps Titanium (2 each)</p> <p>a) Length 15 cm / 6" Jaw 1.5 mm                      b) Length 18 cm / 7" Jaw 1.5 mm                      c) Length 24cm Jaw 1.5mm</p>	<p>10 RING TIP TITANIUM MICRO TISSUE FORCEP, Sapphire / Enhanced needle grip Surface, round handle ring smooth - <b>4 nos each</b></p> <p>a) Length 180mm / 7" – 0.5 x 1 mm                      b) Length 180mm/ 7" – 0.5 x 1 -1.3 x 2 mm                      c) Length 210mm - 0.5 x 1 mm</p> <p>Delicate Tissue Forceps –                      11 DEBAKEY – GERALD – Atraumatic Tissue Forceps Titanium (4 each)</p> <p>a) Length 15 cm / 6" Jaw 1.5 mm                      b) Length 18 cm / 7" Jaw 1.5 mm                      c) Length 24cm Jaw 1.5mm</p>
Pg 46, 47	<p>12 DE- BAKEY – ADSON, Atraumatic tissue Forceps</p> <p>a) Length 12.5 cm / 4 1/2" Jaw 1.5 mm - 1 No</p>	<p>12 DE- BAKEY – ADSON, Atraumatic tissue Forceps</p> <p>a) Length 12.5 cm / 4 1/2" Jaw 1.5 mm - <b>2 Nos</b></p>
Pg 47	<p>17 METZENBAUM SCISSORS , ring handle extra light curve edge ultra edge for ultimate cutting performance .Gold plate sank</p> <p>a) Length 180 mm /7" – 2Nos.</p>	<p>17 METZENBAUM SCISSORS , ring handle extra light curve edge ultra edge for ultimate cutting performance .Gold plate sank</p> <p>a) Length 180 mm /7" – <b>4Nos.</b></p>
Pg 47 Para 18	<p>18 METZENBAUM SCISSORS , Straight, ring handle extra light curve edge ultra sharp edge for ultimate cutting performance TC inserts with micro serration</p> <p>a) Length 180 mm – 1 No.                      b) Length 200 mm -1 No.</p>	<p>18 METZENBAUM SCISSORS , Straight, ring handle extra light curve edge ultra sharp edge for ultimate cutting performance TC inserts with micro serration</p> <p>a) Length 180 mm – <b>4 Nos.</b>                      b) Length 200 mm -<b>4 Nos.</b></p>
Pg 48 Para 29	<p>29 COOLLEY PEDIATRICS ATRAUMATIC VASCULAR CLAMP</p> <p>a) Length 14 cm – 1 No</p>	<p>29 COOLLEY PEDIATRICS ATRAUMATIC VASCULAR CLAMP</p> <p>a) Length 14 cm with <b>jaw sizes 8mm, 12mm &amp; 16mm</b> – 1 No each</p>
Pg 48	<p>37. Tube occluding forceps with safety guard for CPB – 10 each</p> <p>a) length 15cm/6"                      b) length 20cm/8"</p>	<p>37. Tube occluding forceps with safety guard for CPB – <b>12 nos each</b></p> <p>a) length 15cm/6"                      b) length 20cm/8"</p>
Pg 48 Para 39	<p>Line organizer for circuit for cardiopulmonary bypass with slots to fit the tubings of size ½" (one slot), 3/8" (two slots), ¼" (four slots) – 2 Nos.</p>	<p>Line organizer for circuit for cardiopulmonary bypass with slots to fit the tubings of size ½" (one slot), 3/8" (two slots), ¼" (four slots) – <b>2 Nos.</b></p> <p><b>Note: Can be supplied from other manufaturer with the same quality standards mentioned in the tender</b></p>

Tender Page & Para	TENDER SPECIFICATION	READ AS
Pg 48 Para 40	40 Cooley atrial retractor rigid – 1each a) 21.5 cm b) 23 cm c) 27 cm	40 Cooley left & right atrial retractor rigid – <b>1each for small , medium &amp; large blade size</b>
Pg 48	42. Cushing nerve hooks 19cm / 7 ½” – 1No. 43. Crile nerve hooks 14.5cm/ 5 ½” – 1 No.	42. Cushing nerve hooks 19cm / 7 ½” – <b>4 Nos.</b> 43. Crile nerve hooks 14.5cm/ 5 ½” – <b>4 Nos.</b>
Pg 49	45. Epicardial fat retractor for CABG small & medium – 1 each	45. Epicardial fat retractor for CABG small & medium – <b>2 nos each</b>
Pg 49	51. Morse Sternal retractor –double blade Aluminium a) Adult – maximum spread 200mm, length – 150mm, 40x20mm blade b) Pediatric - maximum spread 150mm, length – 120mm, 12x20mm blade	51. Morse Sternal retractor –double blade Aluminium - <b>2 nos each</b> a) Adult – maximum spread 200mm, length – 150mm, 40x20mm blade b) Pediatric - maximum spread 150mm, length – 120mm, 12x20mm blade
Pg 49 Para 55	55. Titanium clip applying forceps – 2each a) For small clip – 19.5cm (length) b) For Medium clip – 19.5cm(length) c) For Large clip – 20.5cm(length)	55. Titanium clip applying forceps a) For small clip – 19.5cm (length) - <b>4 nos</b> b) For Medium clip – 19.5cm(length) - <b>4 nos</b> c) For Large clip – 20.5cm(length) - <b>2 nos</b> <b>Note: Can be supplied from other manufacturer with the same quality standards mentioned in the tender</b>
Pg 50 Para 79	79. Cardiac tissue stabilizer with enhanced stability and flexibility (disposable with sternal spreader) – 2 No.	79. Disposable cardiac tissue stabilizer with enhanced stability and flexibility ( <b>with reusable sternal spreader for disposable sternal blades of same OEM</b> ) – <b>2 Nos.</b>
Pg 50	CE should be mentioned on each instrument	<b>Deleted</b>
Pg 50	Manufacturer name and part number should be mentioned on each and every instrument	Manufacturer name, part number , <b>certifications like CE/US FDA/BIS/ISO should be engraved</b> on each and every instrument
Pg 50	Manufacturer should ISO certified. Copy of certificate to be enclosed.	Manufacturer should have <b>ISO 13485 certified. All instruments should meet ISO 7153-1 quality standards.</b> Copy of certificates to be enclosed.
		<b>Added Para:</b>
		Hegar dilators: 3mm to 26mm - 1 set
		Self retraing sternum retractor system along with LA retractors ( Carpentier design) - 1 no
		Mitral valve hook ( Carpentier design) - 4 nos

Tender Page & Para	TENDER SPECIFICATION	READ AS
		Crocodile self retraing retractor - 2 nos each a. straight (small, medium, large) b. Curved (small, medium, large) c. Hinged (small, medium, large)
		Allis forceps 6" - 8 nos
		Artery forceps curved 6" - 24 nos
		Artery forceps curved 8" roberts - 24 nos
		Artery forceps curved 8" tonsil - 24 nos
		Artery forceps mosquito 14cm cd. - 24 nos
		Artery forceps mosquito 14 cm st. - 24 nos
		B.p.handle no.3 - 4 no
		B.p.handle no.4 - 4 nos
		B.p.handle no.7 - 4 nos
		Czerney's retractor - 2 nos
		Double ended retractor - 4 nos
		Russian Forceps 8" - 2 nos
		Scissors curved t.c. mayo. 7" - 4 nos
		Scissors straight t.c. mayo. 7" - 2 nos
		Sponge holder 10" - 2 nos
		Sponge holder 8" - 2 nos
		Suction tip frazier 2 - 2 no
		Suction tip frazier 3 - 2 no
		Suction tip frazier 4 - 2 no
		Towel clip 4" - 12 nos

Tender Page & Para	TENDER SPECIFICATION	READ AS
		Towel clip 5" - 25 nos
		Tubbs dialator pediatric - 1 no
		Deavers Retractor - 3 nos
		S.S.Instrument Tray 15" x 18" PERFORATED - 6 nos
		S.S.Instrument Tray 16" x 14" PERFORATED - 6 nos
		S.S.Instrument Tray 10" x 15" PERFORATED - 6 nos
		Kidney tray 12" - 5 nos
		Kidney tray 6" - 5 nos
		SS Bowl 6, 14, 16, 18 cm - 4nos each
		Debaky forces 6", 8" 1.5mm - 6 nos each
		Ross aortic wall retractor assorted - 6 nos
		Ronguers 15cm, 2x10cm, 30 deg angled Upword & downword - 1 each
		Right angle forceps blunt tip small & large - 2 nos each
<b>Item No 02 IABP (Intra Aortic Balloon Pump)</b>		
Pg 51 Para 3.6	Large display for brighter and very good visibility from a distance in lighting conditions	Large <b>touch screen</b> display for brighter and very good visibility from a distance in lighting conditions
Pg 51 Para 3.10	<b>Optical</b> Blood leak detect for early indication of blood coming into the balloon lumen due to IABC leak	Blood leak detector for early indication of blood coming into the balloon lumen due to IABC leak
Pg 52 Para 4.3	Intra Aortic Balloon Catheter for Adults, Size: 34cc - Qty: 3 Nos, Size: 40cc - Qty: 7 Nos	Intra Aortic Balloon Catheter for Adults, Size: <b>30/34</b> cc - Qty: 3 Nos, Size: 40cc - Qty: 7 Nos
Pg 52 BOQ.4	Intra Aortic Balloon Catheter for Adults, Size: 34cc 3 Nos.	Intra Aortic Balloon Catheter for Adults, Size: <b>30/34</b> cc - 3 Nos.
		<b>Added para:</b>
BOQ.8		Pressure Transducer cable - 3 nos

Tender Page & Para	TENDER SPECIFICATION	READ AS
<b>Item No 03 Heart lung machine with accessories</b>		
Pg 53 Para 2.1.3.c	Temperature Monitor with at least two probes	Temperature Monitor with probes <b>adult &amp; pediatric - 2 nos each</b>
Pg 53 Para2.2.1	Stainless steel line clamps - 10 nos	Stainless steel line clamps - <b>12 nos</b>
Pg 53 Para2.1.4 a	Air- Oxygen Blender with hoses and Flow meter	<b>Electronic Air, Oxygen &amp; CO2</b> Blender with hoses and Flow meter
Pg 53 Para 3.1.	5- Pump Console	<b>5 pump console or 4 pump console with 5 pump heads</b>
Pg 53 Para 3.1.1	The unit should have 5 pump console compactly arranged with separate power supply and control modules. Should have easy access connectors for interchanging the pump.	The unit should have 5 pump <b>head</b> compactly arranged with separate power supply and control modules. Should have easy access connectors for interchanging the pump.
Pg 53 Para 3.1.5	"Individual pump heads should have Harvey Roller pumps with facility for tubing to be used adjustable from ¼" to 1/16" through 3/8" and ½" by easily changeable mechanism."	"Individual pump heads should have Harvey <b>/horse shoe</b> Roller pumps with facility for tubing to be used adjustable from ¼" to 1/16" through 3/8" and ½" by easily changeable mechanism."
Pg 54 Para 3.1.6	Individual pump heads should have display in digital –The total infusion volume in litres and <b>delivery time</b> , the flow rates in LPM and in RPM	Individual pump heads should have display in digital –The total infusion volume in litres & flow rates in LPM and in RPM
Pg 54 Para 3.2	Should have a venous control module with single pole mast with electronic venous line occluder ( <b>Rate to be offered if available</b> ).	Should have a venous control module with single pole mast with electronic venous line occluder
Pg 54 Para 3.6.4	Temperature display range of 0- 41 ° Celsius with high temp alam/cutoff feature; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with 2 or more temperature display.	Temperature display range of <b>2- 40 ° C</b> with high temp alam/cutoff feature; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with 2 or more temperature display.
Pg 54 Para 3.6.6	Water outlet temperature of heat exchanger and blanket range 0-40° C.	Water outlet temperature of heat exchanger and blanket range <b>2-40° C</b> .
Pg 54 Para 3.6.10	Temperature probe module for the operating ranges of 0-40° C.	Temperature probe module for the operating ranges of <b>2-40° C</b> .

<b>Tender Page &amp; Para</b>	<b>TENDER SPECIFICATION</b>	<b>READ AS</b>
3.7	Monitors:	<b>Added para:</b> Should have display of delivery time and volume for cardioplegia pump head
Pg 55 Para 3.9	Sevoflurane Vapourizer - 1 no	Sevoflurane Vapourizer with <b>mixture blender, tubing &amp; holder</b> - 1 no
Pg 55 Para 3.10	Safety Devices: Safety monitor should have optional capability for computer interface to retrieve perfusion data	Safety Devices: Safety monitor should have capability for computer interface to retrieve <b>perfusion data for recording &amp; management</b>
Pg 55 Para 3.11.5	Compatible Co2 Blender should be supplied as standard	Compatible Co2 Blender should be supplied as specified in para 2.1 - 4a
Pg 56 BOQ.2	Stainless steel line clamps 10 Nos.	Stainless steel line clamps <b>12 Nos.</b>
Pg 56 BOQ.7	Sevoflurane Vapourizer 1 Nos	Sevoflurane Vapourizer with <b>mixture blender, tubing &amp; holder</b> - 1 No
		<b>Added para:</b>
BOQ.8		Electronic Air, Oxygen & CO2 Blender with hoses and Flow meter - 1 No
BOQ.9		Temperature probes adult & pediatric - 2 nos each
<b>Item No 04 BATTERY POWERED VERTICAL (RECIPROCATING) STERNUM SAW&amp; REDO (OSCILLATING/ SAGITTAL) STERNUM SAW</b>		
	BATTERY POWERED VERTICAL ( <b>RECIPROCATING</b> ) STERNUM SAW& REDO (OSCILLATING/ SAGITTAL) STERNUM SAW	BATTERY POWERED VERTICAL STERNUM SAW & REDO (OSCILLATING/ SAGITTAL) STERNUM SAW
Pg 57 Para 1	Vertical ( <b>Reciprocating</b> ) Sternum Saw Hand Piece(Qty-1)	Vertical Sternum Saw Hand Piece(Qty-1) BOQ to be changed accordingly
Pg 57 Para 1.i	Saw noise level should not more than 84db	Saw noise level should not more than <b>95db</b>
Pg 57 Para 1.l	Should be quoted with Two Sternum Guards	Should be quoted with <b>Two adult &amp; one pediatric</b> Sternum Guards
Pg 57 Para 2.c	Saw Noise level should not be more than 84db	Saw Noise level should not be more than <b>95db</b>
Pg 57 Para 3	Battery Charger with 4 batteries (Qty-1):	Battery Charger with <b>4 charging slots &amp; 4</b> batteries (Qty-1 set):
Pg 58 BOQ.1	Vertical (Reciprocating) Sternum Saw Hand Piece 1 Nos.	Vertical Sternum Saw Hand Piece 1 Nos.

Tender Page & Para	TENDER SPECIFICATION	READ AS
Pg 58 BOQ.3	Battery Charger with 4 rechargeable batteries 1 Nos	Battery Charger with <b>4 charging slots &amp; 4 batteries</b> - 1 set
<b>Item No 05 Ultrasonic Surgical Aspirator/Dissceter(CUSA)</b>		
Pg 59 Para 3	The system should have at least two different range of working frequency hand pieces (23/25, 34/35/36 kHz). Or Two hand pieces of frequency 23Hz or more	The system should have <b>at least two handpieces with different energy levels and range of working frequency 20-40kHz</b>
Pg 59	A. For hand pieces: (i) Standard tips for micro length - Qty 05 Nos. (ii) Standard tips for Macro Qty 05 (iii) Standard tips for high fibrotic lesion Qty 05 nos. (iv) Standard tips - 05 Nos	A. For hand pieces <b>angled &amp; straight:</b> (i) Standard tips for micro length - 5 each (ii) Standard tips for Macro - 5 each (iii) Standard tips for high fibrotic lesion - 5 each (iv) Standard tips - 05 each <b>Added para:</b> Assorted tips for bone sculpting - 1 set
	Other Accessories	Other Accessories
Pg 59	Suction Canister, Reusable, qty 5 no's.	Suction Canister <b>1.5 to 2 L</b> , Reusable, qty 5 no's.
BOQ	A. For hand pieces	A. For hand pieces <b>angled &amp; straight:</b>
BOQ.2	Standard tips for micro length 5 Nos	Standard tips for micro length - 5 each
BOQ.3	Standard tips for Macro 5 Nos.	Standard tips for Macro - 5 each
BOQ.4	Standard tips for high fibrotic lesion 5 Nos	Standard tips for high fibrotic lesion - 5 each
BOQ.5	Standard tips 5 Nos	Standard tips - 05 each
BOQ.12	Sterilization Tray 10 Nos.	Sterilization Tray <b>2 Nos.</b>
BOQ.13		<b>Added para:</b> Assorted tips for bone sculpting - 1 set
<b>Item No 07 Ultrasonic cutting &amp; coagulation, advanced Radio frequency/Bipolar energy and monopolar energy system</b>		
	<b>BOQ</b>	<b>BOQ</b>
Pg 63	Dissecting Shears Straight Handpiece Open with transducer: a. Dissecting Shears Straight Handpiece Open - 10 pcs. b. Transducer Open for Dissecting Shears Straight - 01 reusable	Reusable Transducers for open & laparoscopic surgery <b>with minimum shelf life of 90 cycles or more - 10 nos each</b> Dissecting shears ultrasonic/integrated RF for open surgery - 10 nos Dissecting shears ultrasonic/integrated RF for laparoscopic surgery - 10 nos



Tender Page & Para	TENDER SPECIFICATION	READ AS
Pg 63	Dissecting Shears Curved/straight Handpiece Laparoscopic with transducer a. Dissecting Shears Curved Handpiece Laparoscopic - qty 10 pcs b. Transducer Open for Dissecting Shears curved - 01 reusable	Dissecting shears integrated ultrasonic/ RF for open surgery - 10 nos Dissecting shears integrated ultrasonic/ RF for laparoscopic surgery - 10 nos
Pg 63	Vessel Welder /cutting and sealing Straight Handpiece Open with transducer a. Vessel Welder/ cutting and sealing Straight Handpiece Open - qty 10 nos b. Vessel Welder/ cutting and sealing Straight Transducer Open - 01 reusable	<b>Deleted</b>
Pg 63	Vessel Welder /cutting and sealing Straight/curved Handpiece Laproscopic with transducer a. Vessel Welder/ cutting and sealing curved/Straight Handpiece Open - qty 10 nos b. Vessel Welder/ cutting and sealing Straight Transducer Open - 01 reusable	<b>Deleted</b>
	Accessories for Monopolar device	
Pg 63	(d) Five sets of electrodes each (long and short) with electrode container with Holder. 1 set	(d) Footswitch compatible electrodes with long and short tips with electrode container/ Holder - <b>5 set</b>
Pg 63	(f) bipolar forceps one straight and one bayonet type with cable, 1 set	(f) bipolar forceps one straight and one bayonet type with cable - <b>5 nos each</b>
Pg 63	(g) cable for connecting to standard mono polar and bipolar laparoscopic instruments -01 each	(g) cable for connecting to standard mono polar and bipolar laparoscopic instruments - <b>5 nos each</b>
<b>Item No 08 Surgical Loupes</b>		
Pg 65 Para 1	The telescope should be adjustable to meet the inter pupillary distance of surgeons according to their working distance and pupil height and vertex distance.	The <b>custom made</b> telescope to meet the inter pupillary distance of surgeons according to their working distance and pupil height and vertex distance. <b>The changes in customized specification can be made twice during warranty period</b>
Pg 65 Para 4	Light weight frame not more than 90 gms.	Light weight frame not more than <b>100 gms.</b>
		<b>Added para:</b> Should be European CE (with 4 digit notified body no)/ US FDA/ BIS approved

Tender Page & Para	TENDER SPECIFICATION	READ AS
<b>Item No 09 Extra Corporeal Membrane Oxygenator (ECMO)</b>		
Pg 67 Para 6	Following ECMO Consumables to be supplied (2 each) and per unit price to be quoted:	Following ECMO Consumables to be supplied <b>(5 each)</b> and per unit price to be quoted:
Pg 67 BOQ.2	Oxygenator 2 Nos	Oxygenator <b>5 Nos</b>
Pg 67 BOQ.3	Tubing-anti-thrombotic coated 2 Nos	Tubing-anti-thrombotic coated <b>5 Nos</b>
Pg 67 BOQ.4	Pump-head 2 Nos	Pump-head <b>5 Nos</b>
Pg 67 BOQ.5	Heat exchanger 2 Nos	Heat exchanger <b>5 Nos</b>
<b>Item No 10 Cell Saver</b>		
Pg 68 Para 6	Centrifugal bowl/chamber capacity should be 125-150ml with two stage filling cycle	Centrifugal bowl/chamber capacity should be <b>55-225ml</b> with two stage filling cycle
Pg 68 Para 10	Should be able to continue the procedure and maintain data even in case of power failure for atleast 30minutes with either inbuilt battery backup or with external UPS	Should be able to continue the procedure and maintain data even in case of power failure for atleast 30minutes with either inbuilt battery backup <b>or with external online UPS</b>
Pg 69 Para 21.v.a	Operational: 10-300	<b>Deleted</b>
Pg 69 Para 21.v.b	Storage: 5-300	<b>Deleted</b>
Pg 69 Para 22	Should be supplied with 10 sets of consumable accessories in addition to the offered disposable accessories by Supplier along with the one pack of machine.	Should be supplied with 10 sets of consumable accessories <b>for smooth functioning of the system</b>
<b>Item No 11 Surgical Xenon head light and light source</b>		
Pg 70 BOQ.2	Head light band with fiber optic cable 1 Nos	Head light band with fiber optic cable <b>2 Nos</b>
Pg 70 BOQ.3	Spare bulb 1 no	Spare bulb <b>2 nos</b>
<b>Item No 12 Vascular Doppler for coronary Graft</b>		
		<b>Added para:</b> Should be European CE (with 4 digit notified body no)/ US FDA/ BIS approved

Tender Page & Para	TENDER SPECIFICATION	READ AS
<b>Item No 14 Colour Doppler Echocardiography System (Mid End)</b>		
Pg 73 Para 2.2	Should be field up gradable to next generation system on site.	Should be field up gradable to <b>4D TEE &amp; Transthoracic echo imaging</b>
Pg 73 Para 3.8	Frame rate should be 800 FPS or more	Frame rate should be <b>2500 FPS</b> or more
Pg 75 Para 4.7	High end laser Colour printer with autoduplexing - 01 nos	High end colour laser printer with auto duplexing, <b>scanning facility - 1 no &amp; 2 sets of cartridges.</b>
Pg 75 Para 4.9	Colour Print Paper- 500 sheets	High quality photograde paper of A4 size - <b>1000 nos</b>
Pg 75 Para 4.10	B/W Thermal Paper - 10 rolls	B/W Thermal Paper - <b>20 rolls</b>
Pg 75 Para 4.11	ECG Cable - 02	ECG Cable - <b>05 nos</b>
Pg 75 Para 4.13	<p>System should provide with Latest PC (off-line licensed workstation) with minimum 1TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum 4 USB port, Inbuilt Bluetooth &amp; Wi-Fi, 24"</p> <p>Touch screen LED Monitor, Keyboard, mouse, 10 or latest Windows professional or equivalent, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software should be supplied.</p> <p>PC should be supplied with the licensed software to work on the below features.</p> <ul style="list-style-type: none"> <li>i. Strain and Strain rate imaging.</li> <li>ii. Semi-Automated Border Detection.</li> <li>iii. Tissue Motion Annular Displacement.</li> <li>iv. 2D speckle tracking</li> </ul> <p>(any other Hardware essential for OFFLINE Quantification)</p>	<p>System should provide with Latest PC (off-line licensed workstation) with minimum 2TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum 4 nos <b>USB C port</b>, Inbuilt Bluetooth &amp; Wi-Fi, 24"</p> <p>Medical grade Monitor, <b>wireless Keyboard &amp; mouse, latest Windows professional OS &amp; licensed MS office of latest version</b>, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software should be supplied.</p> <p>PC should be supplied with the licensed software to work on the below features.</p> <ul style="list-style-type: none"> <li>i. Strain and Strain rate imaging.</li> <li>ii. Semi-Automated Border Detection.</li> <li>iii. Tissue Motion Annular Displacement.</li> <li>iv. 2D speckle tracking</li> </ul> <p>(any other Hardware essential for OFFLINE Quantification)</p>
Para 6.3	Suitable Servo controlled Stabilizer/CVT	<b>Deleted</b>
Para 6.4	UPS of suitable rating conforming to IS-302 shall be supplied. Servo stabilizer is not required if the UPS has voltage correction facility.	One 3KVA online UPS with a backup of 30 min minimum, from APC or Emerson brand
BOQ.7	High end laser Colour printer with auto duplexing 1 Nos	High end color laser printer with auto duplexing, <b>scanning facility - 1 no &amp; 2 sets of cartridges.</b>

Tender Page & Para	TENDER SPECIFICATION	READ AS
BOQ.9	Colour Print Paper 500 sheets	High quality photograde paper of A4 size - <b>1000 nos</b>
BOQ.10	B/W Thermal Paper 10 Rolls	B/W Thermal Paper - <b>20 rolls</b>
BOQ.11	ECG Cable 2 Nos	ECG Cable - <b>05 nos</b>
<b>Item No 15 Colour Doppler Echocardiography System (High End)</b>		
		<b>Added para:</b> Should be field up gradable to next generation system on site.
Pg 77 Para 9	System must be offered with Speckle reduction imaging: Image processing technique to remove speckles and clutter artifacts.	System must be offered with Speckle reduction imaging: Image processing technique to remove speckles and clutter artifacts. <b>4D Depth rendering algorithm with light source (True view/HD live) for better 4d visualization.</b>
Pg 78 Para 14	Should be able to perform MPR views for Quantification from 3D Imaging on Volume/Strain measurements like LV volumes, Ejection fraction from 3D Image, etc. Also should offer 3D synchronicity indicates to measure and compare timing of maximum contraction of regional LV volumes/Strain. Should display global LV volume and should provide simultaneous display of 17 regional volume/ strain waveform. This should be offered both OFFLINE as well as online. OFF-LINE workstation of Apple or equivalent brand (Both hardware and software) should be supplied and highlighted in the technical bid.	Should be able to perform MPR views for Quantification from 3D Imaging on Volume/Strain measurements like <b>LA, LV &amp; RV volumes</b> , Ejection fraction from 3D Image, etc. Also should offer <b>3D /Triplane</b> synchronicity indicates to measure and compare timing of maximum contraction of regional LV volumes/Strain. Should display global LV volume and should provide simultaneous display of 17 regional volume/ strain waveform. This should be offered both OFFLINE as well as online. OFF-LINE workstation of Apple or equivalent brand (Both hardware and software) should be supplied and highlighted in the technical bid.
Pg 79 Para 20.4	Adult Transesophageal 3 D probe	Adult Transesophageal 3 D probe <b>with customizable TEE probe button.</b>
Pg 79 Para 20.6	Epi-aortic probe, vascular probe Linear Array <b>Matrix</b> transducer with Frequency of 7-15 MHz	Epi-aortic probe, vascular probe Linear Array transducer with Frequency of 7-15 MHz

Tender Page & Para	TENDER SPECIFICATION	READ AS
Para 21	<p>System should provide with</p> <p>a.) Latest PC (off-line licensed workstation) with minimum 2TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum 4 USB port, Inbuilt Bluetooth &amp; Wi-Fi, 24" Touch screen LED Monitor, Keyboard, mouse, 10 or latest Windows professional or equivalent, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software and High End colour laser Printer with auto duplexing should be supplied. PC should be supplied with the licensed software to work on the below features.</p> <p>i. Strain and Strain rate imaging.</p> <p>ii. Semi-Automated Border Detection.</p> <p>iii. Tissue Motion Annular Displacement.</p> <p>iv. Mitral Valve 3D data sets</p> <p>v. 2D speckle tracking (any other Hardware essential for OFFLINE Quantification)</p> <p>b.) Latest B/W Thermal Printer.</p> <p>c.) One 3KVA online UPS with a backup of 30 min minimum, from APC or Emerson brand</p> <p>d.) ECG cable: two in numbers</p>	<p>System should provide with</p> <p>a.) Latest PC (off-line licensed workstation) with minimum 2TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum <b>4 nos USB C</b> port, Inbuilt Bluetooth &amp; Wi-Fi, <b>24" medical grade Monitor, wireless Keyboard &amp; mouse, latest Windows professional OS &amp; latest version of license MS office professional</b>, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software with below features.</p> <p>i. Strain and Strain rate imaging.</p> <p>ii. Semi-Automated Border Detection.</p> <p>iii. Tissue Motion Annular Displacement.</p> <p>iv. Mitral Valve 3D data sets</p> <p>v. 2D speckle tracking (any other Hardware essential for OFFLINE Quantification)</p> <p>b.) Latest B/W Thermal Printer with 20 rolls of paper</p> <p>c.) One 3KVA online UPS with a backup of 30 min minimum, from APC or Emerson brand</p> <p>d.) ECG cable: 5 nos</p>
Para 33.3	50 rolls of thermal paper to be provided for thermal printer.	<b>20</b> rolls of thermal paper to be provided for thermal printer.
Para 33.4	Colour Print Paper (Glossy)- 500 sheets	High quality photograde paper of A4 size - <b>1000 nos</b>
Para 33.5	One set of Colour laser printer (compatible) cartridges, in addition to the supplied with printer.	One high end colour laser printer with auto duplexing, scanning facility & 2 sets of cartridges.
BOQ.13	Colour laser printer 1 Nos	High end color laser printer with auto duplexing, scanning facility - 1 no Cartridges - 2 sets
BOQ.16	50 rolls of thermal paper to be provided for thermal printer. 50 Rolls	Thermal paper - <b>20 rolls</b>
BOQ.17	Colour Print Paper (Glossy) 500 Sheets	High quality photograde paper of A4 size - <b>1000 nos</b>
BOQ 18	One set of Colour laser printer (compatible) cartridges, in addition to the supplied with printer. 1 Set	<b>Deleted</b>

Tender Page & Para	TENDER SPECIFICATION	READ AS
<b>Item No 17 Surgical LED Head Light</b>		
Para 9	Light intensity at least 25000Lux at 250mm	Light intensity at least <b>55000Lux/300 lumen</b> at 400mm
BOQ.2	rechargeable battery 3 Nos	Rechargeable battery <b>4 Nos</b>

**All other contents of the tender enquiry including terms & conditions remain unaltered.**

**Note:**

- i. **Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of bids.**