KERALA MEDICAL SERVICES CORPORATION LTD
(A Government of Kerala Undertaking)
Thycaud P.O, Thiruvananthapuram - 14, Kerala.
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CIN: U24233KL200TSGC021616, PAN : AADCK4029M, GSTIN : 32AADCK4029M1ZK

Running Contract Details	
Equipment Name	Ultrasound Machine with Color Doppler (3D/4D) Model D
Running Contract Valid Till	27-11-2025
Tender Ref No	KMSCL/EP/T507(R)/1097D/2023
Tendered Quantity	10
Supplier Name	M/s Anamdev Engineers
GST No	32ABKPG3145P1ZJ
Installation & Delivery Period	8 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	**Contact Details**	
1st Floor Ã¢â‚¬Å“VrindavanÃ¢â‚¬Â• Door No. 43/1606 B North Railway Station Road Ernakulam Cochin-682018	Contact Person	Mr. Jayakumar
	Phone	
	Mobile No	9847049686
	Email	mail@anamdev.com

Item-wise Price Details

#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	Ultrasound machine with color doppler High end with all accessories except the following *Model & Make : Epiq Elite / Philips*	9352000 Incl.GST :12%	689710	10041710
2	**Convex probe with biopsy guide** *Model & Make : C5-1/ Philips*	677107.2 Incl.GST :12%	49936.66	727043.86
3	**Linear Matrix Probe 3 to 12 MHz** *Model & Make : eL18-4/ Philips*	753547.2 Incl.GST :12%	55574.11	809121.31
4	**Dedicated Trans-rectal/ Trans vaginal probe with biopsy guide** *Model & Make : C10-3v/ Philips*	624456 Incl.GST :12%	46053.63	670509.63
5	**Linear probe 7 to 17 Mhz** *Model & Make : L18-5/ Philips*	553795.2 Incl.GST :12%	40842.4	594637.6
6	**Convex probe 4D** *Model & Make : X6-1/ Philips*	936768 Incl.GST :12%	69086.64	1005854.64
7	**Patient couch**	141600 Incl.GST :18%	9912	151512

Item-wise Price Details				
8	**Ergonomic high back chair**	21240 Incl.GST :18%	1486.8	22726.8
9	**Patient stool**	5900 Incl.GST :18%	413	6313
10	**Foot step**	3540 Incl.GST :18%	247.8	3787.8
11	**Desktop Computer**	230100 Incl.GST :18%	16107	246207
12	**Color Printer with scanner**	70800 Incl.GST :18%	4956	75756
		13370853.6	**984326.03**	**14355179.63**

Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	**4th Year**	**5th Year**	**6th Year**	**7th Year**	**8th Year**	**9th Year**	**10th Year**
Ultrasound machine with color doppler High end with all accessories except the following							
Labour	2,30,000.00	2,41,500.00	2,53,575.00	2,66,254.00	2,79,566.00	2,93,545.00	3,08,222.00
Comprehensive	6,66,226.00	6,96,787.00	7,28,877.00	7,62,571.00	7,97,949.00	8,35,097.00	8,74,102.00

Other terms & conditions

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

2. The supplier shall submit performance security amounting to 5.00% of the value of the supply order.

3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.

4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).

5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

Technical Specification

Equipment :Ultrasound machine with color doppler High end with all accessories except the following

Equipment: Ultrasound Machine with Color Doppler (3D/4D Model D)

1. System should be state of art, top of the line premium end fully digital, high resolution ultrasound machine for various routine as well as advanced applications and should have upgradability to electronic 4D Matrix Technology.
2. US FDA &CE complaint. Also mention year of launch.
3. The system should incorporate facility for High Resolution B mode, M mode, PW, CW, Colour Doppler, Power Doppler, Angio, directional power angio, Contrast imaging, peripheral vascular, transcranial, superficial parts, Duplex and Triplex Imaging modes. Thyroid, general Imaging, fertility, renal and superficial parts with 4D imaging.
4. The system should have high density beam former technology and should be able to handle independent processing channel for

each receiving information from transducer.

5. 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 if not available in technical data sheet.
6. The system should perform up to 1900 frames/sec or more. Also system should support transducers of frequency range 1-17Mhz.
7. 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.
8. The system should have Quick View mode for 2D & CDI Presets selection during exam and minimum 8 sub presets for 2D & CDI Modes.
9. The system panel height should be adjustable according to the user comport.
10. The panel should have Swivel and In/Out Control for Maximum User Comfort.
11. The system should have latest generation /pulse subtraction / Pulse Inversion Tissue Harmonic Imaging for better contrast and reduced side lobe artifact.
12. System should have receiving end frequency and spatial compound imaging technology for reducing clinical artifacts
13. Compound Imaging should work in all the probes
14. Compound Imaging should be possible on colour and Doppler Modes.
15. Transducers operate in Trapezoid formats with and without compound imaging.
16. Volume imaging, multi slice imaging with variable slice thickness (0.5-10mm) and multiplanar imaging on all types of 3D and 4D modes.
17. Should be capable for performing live 4D imaging with electronic 4d matrix technology volume transducers. 4D imaging should be possible in gray scale, colour mode, harmonic mode and with contrast agent imaging. Instant rendering of MPR images should be possible with similar resolution as that of 2D
18. Multiparametric Image Optimization: The system shall automatically and intelligently optimize key imaging parameter in real-time, maintaining image uniformity across tissue types with minimal adjustments as soon as the transducer is placed on the patient.
19. The system should have 256 or more discrete gray scales.
20. 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.
21. 10 times or more 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.
22. The system should have FOUR active transducer ports or more with electronic switching facility.
23. The system should High Dynamic range of 200db or more. Dynamic range will be preferred please specify range.
24. The system should have Power Doppler Imaging mode with directions.
25. The system should have PW Doppler & HPRF mode for all transducer 0.3 to 34 KHz.
26. Specify Colour Velocity Scale Selection.
27. Pw sample gate selection should be 1mm to 20mm or more.
28. The depth of scanning should be 40 cm or more and should be selectable by user.
29. 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:
30. During Elasto mode, Reference 2D mode should display side by side. After freeze best cycle selected from cine mode reference of compression wave.
31. 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.
32. Convex and linear probe and endocavity probes should supportstrain Elastography for all applications including prostate Elastography. Necessary software should be built in
33. Convex and linear probes should offer shear wave elastography for abdominal, breast, and thyroid etc applications.
34. System should be able to generate a colour coded elastogram with a reference adjustable elasticity scale for each application.
35. System should be able to display simultaneously both colour coded elastogram and corresponding B-Mode image in real time for performing elastography guided biopsies/FNAC.
36. There should be user adjustable elasticity box size with a Display Depth: 0-8cm.
37. Elastography quantification should be available with pixel accurate absolute or discreet Elasticity values on all transducers.
38. Elastography quantification tool should be able to provide Mean, Max, Median & Min elasticity value of the tissue in both m/s or kPA on all transducers.
39. System should have integrated report worksheet for Liver elasticity assessment.
40. The system shall provide Colour coded stiffness map with 4 colour display modes Colour, size, strain ratio, shear velocity.
41. Maximum shear wave velocity 10m/s; Minimum Depth shear-wave imaging should be 16cm; Minimum depth shear-wave quantification should be 8cm.
42. 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.
43. The system should have advanced contrast package available.

44. During contrast examination the system should be able to Display Wash In, retention and wash out information in the lesion with time intensity curves.
45. The system offer user selectable tint maps to allow enhanced visual conspicuity of contrast agent.
46. The system should have Contrast Quantification package so that it able to measure the arrival time of contrast agent at any point of time.
47. The system shall provide a toolbox for 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

48. The system shall offer contrast imaging package with Contrast Harmonic and Quantification.

49. CPS & CHI Switching between contrast modes:

50.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

51. System should have multivariate Tissue Harmonic Imaging on all transducers

52. System should have Real-time, Fusion Imaging allowing to locate difficult lesions faster and to navigate complex anatomy securely, while carrying out invasive procedures (Optional).

a. For a comprehensive pre-and post-interventional evaluation system should allow to work in any ultrasound imaging mode including colour Doppler and contrast-enhanced ultrasound etc.

b. System should have provision to show innovative navigation tool showing 3D reconstructed data for intuitive probe positioning in quad view.

c. The system should have dual view.

d. System should able to view the real time Ultrasound images overlapped with reference CT/MR image like Bend Imaging.

e. The system should have Blend Image Brightness control to CT/Ultrasound data.

f. The system should have Sensor based 3D Information for Convex and Linear probes.

g. The Fusion Registration can be done simple two step operation of Angle and Position synchronization.

h. The system should enable Quad display of live ultrasound with pre-loaded CT or MR data Blend Image (CT/MR Overlapped with Ultrasound), Volume based Sensor 3D Image combined with an image of two modalities with Intuitive probe position tool should be shown.

i. Fusion Adaptor should be given for convex and linear probes.

j. System should support Auto Track Device for CT and MR for Automatic Registration of Fusion Data set and quoted as option.

53. The system should have advanced DICOM Modalities work list.

54. 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.

55. Monitor:

Monitor should be high resolution, 21” (inch) or more Black Lit LED/LCD Monitor with minimum 1080x1080 matrix. Please specify resolution range with IPS technology.

56. Console:

56.1 The freely programmable, mode-sensitive 10” or more Colour Touch Command Screen which enables direct access to all basic and advanced system controls.

56.2. Convenient transducer trays on both sides should put up to six transducer within easy reach in any scanning position.

56.3. Basic and advanced quantification functions should be activated directly on the programmable console.

56.4. All Mode keys concisely arranged with multi-gain controller should enable direct access to all imaging modes.

56.5. A retractable alphanumeric keyboard should be available to manually enter comments or patient data.

56.6. Control panel can be moved horizontally and vertically according to user comfort Integrated gel warmer.

57. Data Management:

57.1. Minimum 500GB Hard disk should be provided in the standard configuration and External 2TB to be provided additionally. Facilitating efficient management of acquired images. Images can be viewed in Image Review Mode. The system should have Cine loop review facility in individual and mixed modes with memory up to minimum of 400 images and 5 min of 2D cine loop.

57.2. The system should be DICOM 3.0 (or higher version) ready (like send, receive, print, record on CD/DVD, acknowledge etc.) for connectivity to any network, PC/computer etc. In DICOM format.

57.3. Filed images can have output via the USB port (USB Memory or USB HDD) or stored on CD/DVD by image management. The system should be capable of direct export capabilities of 3D printable file formats.

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

58. Measurements and Calculations:

58.1. Auto measurement should be possible on frozen images and Images Recalled from the Image archive.

58.2. The system should have Comprehensive set of Measurements in OB/ Gyn/ Carotid/ Lower Limb/ Upper Limb/ Thyroid/ Testis/ Abdominal Applications.

58.3. Template customization should be possible.

58.4. On Board Report for all packages-report transfer to Print page along with selected images will be printed using normal PC Printer.

58.5 The system should have the facility to take Automatic measurement of the obstetric parameters like AC, BPD, HC, FL. Appropriate advanced fetal sonography reporting software should be provided.

58.6. Post processing in freeze mode (dynamic range adjustable, colour display on/off, colour/Doppler invert, colour/Doppler baseline adjustment, sweep speed, measurement, annotation and pictogram) should be there.

58.7. The system should have real time automatic and manual Doppler calculations and facility to apply automatic Doppler analysis retrospectively to frozen spectral data or data retrieved from Doppler scrolling.

59. Probes (Rate of all probes to be quoted separately) -(If needed order shall be issued).

59.1. Convex Probe with Band width of 1MHz to 5MHz or more with Biopsy guide for abdominal applications and support for strain and shear wave elastography.

59.2. Linear matrix probe of 3 to 12 MHz and should support Strain, Shear, Shear wave Elastography and contrast imaging application.

59.3. Dedicated Trans-Rectal/Trans vaginal Probe with band width of 3 MHz to 11 MHz or more with biopsy guide and should support for strain elastography.

59.4. Linear probe of 7-17 MHz with strain elastography for musculoskeletal and small part applications.

59.5. 1-6 MHz Electronic 4D Matrix probe for live 3D fetal scan and abdominal scan with advanced technology.

60. Accessories rate to be offered separately (If needed order shall be issued)

60.2. Patient Couch (fully motorized high end with adjustable height to enable easy transfer of patients) & two ergonomic high back operator chairs.

60.3. Patient stool and stepper (one each).

60.4. One computer desktop with core i7 CPU-Minimum 4 GB RAM, 1 TB storage with 32 inch display. It should have the software required for real time transfer of ultrasound images in DICOM format from the scanner to the computer.

60.5. One good quality colour paper printer with scanner.

60.6. Any other hardware required for optimum utilization of advanced applications on the scanner.

61. Following items are to be supplied along with Ultraosund Machine free of cost

61.1. 2KVA online UPS

61.2. Signages

61.3. Probe cleaning solution

61.4. Customised suitcase for probes

61.5. Heavy duty covers for cables of probes

Note:

1. If CDSCO (Central Drugs Standard Control Organization) certification is required for the import and marketing of the equipment, then the same shall be submitted along with the technical bid
2. Warranty exclusions if any shall be discussed at the time of prebid meeting else the tender condition as per clause 6.31.20 shall prevail