

Notice Inviting e-Tender

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SUPPLY OF MEDICAL EQUIPMENTS FOR MULTI / SUPER SPECIALITY HOSPITALS OF THE GOVERNMENT OF WEST BENGAL.

(Submission of Bid through *online*)

Bid Reference No.: WBMSCL /NIT-07/2016

Dated – 12.02.2016

The following amendments have been made in the tender document,

Amendment – I

The technical specifications of the High end USG Machine with Colour Doppler Facility has been revised. The revised specification is as follows,

SCHEDULE - II

High end USG Machine with Colour Doppler Facility

1. State of art Colour Doppler system with full digital technology for whole body applications to include (both adults and paediatric)which include abdominal, obs/gyn, peripheral vascular, musculoskeletal, small parts imaging and endocavitary (transvaginal /transrectal) with the following specifications
2. Latest generation electronic phased array color doppler system with **40000 or above** electronic independent channels. System should be DICOM 3 or higher version compatible and capable of being interfaced with HIS/RIS/PACS and connectivity to any PC/computer etc in DICOM format.

3. Should be field upgradeable to next generation system on site. All new software should be upgraded free of cost for at least 3 years.
4. Speckle reduction filter, real time spatial compounding, frequency compounding or better technology should be available in convex and linear probes for better resolution and penetration.
5. 256 gray shades or more for sharp contrast resolution.
6. System should be offered with following electronic broad band width transducers
7. Broad band convex array transducer with frequency range of 2 – 5/ 2-6 MHz suitable for radiology applications.
8. Broad band Linear array transducer frequency range of 5-12/5- 13/ 6-12 MHz suitable for vascular and small parts applications.)
9. Endocavitary Transducer 4 – 9/ 5-9 MHz - Harmonic / Compound imaging should be available in all probes with the following modes and setting for:
10. Tissue harmonic
11. Quantification of harmonics imaging
12. Harmonic imaging in power Doppler imaging mode for improved sensitivity and specificity in differentiating blood/agent from tissue.
13. Gain control in two dimensions for additional level of flexibility to image quality control.
14. Real time high frequency 2D for higher resolution and low frequency Doppler for higher sensitivity in all probes.
15. Frame rate should be 150 FPS or more. The frame rate in triplex mode should not be less than 12 frames per second.
16. Steerable PW/CW on all phased array probes.
17. High-definition acoustic zoom for enlarging sections of 2D and color flow images with more acoustic information for greater clarity and detail while maintaining an optimal frame rate.
18. Modes – 2D B Mode, B/B Mode, M-Mode, steerable PW/CW Doppler, color Doppler, B/M Mode, B/PW Doppler, B/CW Doppler, B/ Power Angio, B and Power Angio should be available.
19. Monitor should be High resolution, non interlaced LCD/ LED Color monitor of 17 inches or more with tilt and swivel facility to view in all angles and all light conditions.
20. Color flow imaging for
21. Increased lateral & spatial resolution
22. Detection of even subtle areas of turbulence, displaying a more physiological blood flow appearance without loss of frame rate
23. Color flow with capability of automatically picking up color flow as a function of focal depth.

24. Tissue colorization (B-Color) for improved contrast resolution.
25. Should have facilities and application software for adult abdominal, obs/gyn, peripheral vascular, musculoskeletal, small parts imaging and endocavitary applications. (All application package should be built into the system).
26. Cine loop facility, both frame by frame and in cine mode, with a memory for atleast 300 2D color images' review and atleast 20 seconds of doppler and M mode data.
27. High frame rate review for better clarity of playback images study in slow motion.
28. Quad loop with memory for pre and post image comparison of any procedure.
29. Memory – 256 frames or more in quad loop. M Mode & Doppler scroll memory -40 seconds or more.
30. PW velocity range up to 5.5 m/s & more than 6.5 m/s with HPRF option at 0 degree preferably. Automatic real time/ frozen tracing of instantaneous peak velocity & instantaneous mean velocity (or frequency) should be available.
31. Various maps for pre and post processing.
32. System Dynamic Range should more than 150db
33. User defined system and application presets for multi-user department. The number of application presets is to be mentioned
34. In- built hard disk storage capacity of at least 80 GB with facility of direct storage and retrieval of B/W and color images (both frozen and cine loops). CD, DVD drive for read and write of stored images.
35. Depth of Field Minimum 28 cm should be available
36. PRF Range should be 500 Hz to 50,000 Hz
37. Alpha numeric key board with illuminated keys and status display. Key panel Height Adjustment should be possible/it can be with a comfortable height. All panel key should be customized, including Freeze Key.
38. Color Map resolution up to 128 levels.
39. Facility for high definition digital acquisition, review and editing for complete patient studies.
40. Unit should have 3transducers holders and one gel bottle holder
41. 3 Active Ports should be available. Any Probes any Port interchangeable connectivity should be possible with simple electronic selection method for interchanging transducers
42. Detailed Radiology, obs & gyn and vascular measurement packages should be available.
43. System should have extensive calculation packages
44. a. Distance, volume ,Area, % stenosis on B mode
45. b. Distance, Time, Heart Rate, Slope on M mode
46. c. Velocity, Acceleration time, Slope, PI, RI, S/D Ratio with Auto Doppler calculation on

Doppler mode

47. The system should have Up / Down & Right / Left Image rotation, One touch Image optimization and Edge Enhancement settings
48. The system should have gate adjustments on spectral modes, auto angle correction, filter adjustment, base line and sweep speed adjustments.
49. System should have facility for separate 2D quick scan (auto 2D optimization)I Doppler Quick Scan(auto baseline and PRF adjustment).

50. SYSTEM ACCESSORIES AND CONSUMABLES

51. Colour Laser printer with direct printing connectivity for printing stored images
 52. Online UPS with appropriate KVA and backup capacity of atleast for 30 mins for all functions of the equipment i.e performing ultrasound procedure, exposure onto films etc.
 53. Color printer paper – 100 sheets
 54. Power supply
 55. Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug. Resettable overcurrent breaker shall be fitted for protection.
 56. Standards, Safety, and Training.
 57. Should be US FDA and CE approved product
 58. Manufacturer should have ISO certification for quality standards.
 59. On site comprehensive training for lab staff and support services till customer satisfaction with the system
- #### **60. Documentation**
61. User/Technical/Maintenance manual to be supplied in English
 62. Certificate of calibration and inspection from factory.