



## **YENEPOYA MEDICAL COLLEGE HOSPITAL**

YENEPOYA UNIVERSITY, UNIVERSITY ROAD, DERALAKATTE-575018

YMCH/BME/2015-16/07

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### **“INVITATION TO SUBMIT QUOTATION FOR ECHO CARDIOGRAPHY MACHINE”**

For detailed requirement and description of the equipment, please go through the next page.

For any clarification please contact

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## SPECIFICATIONS FOR ECHOCARDIOGRAPHY MACHINE

S.NO.	SPECIFICATIONS
1	Latest generation, fully digital Echocardiography system with digital beam former.
2	System should have software to perform advanced cardiac (Adult, Pediatric, Neonatal), Abdominal, vascular, Musculoskeletal, small parts, Transcranial imaging.
3	<p>System should have</p> <ul style="list-style-type: none"> <li>• B-mode</li> <li>• 2D-mode</li> <li>• M-mode</li> <li>• Colour Flow</li> <li>• PW</li> <li>• CW</li> <li>• Steerable CW</li> <li>• Colour Power Doppler and</li> <li>• Directional Colour Power Doppler facility</li> </ul>
4	<p>Operational Characteristics:</p> <ul style="list-style-type: none"> <li>• Should also have advanced 2D quantification package, IMT quantification, etc.</li> <li>• Should have Triplex Imaging and Zoom facility for live &amp; frozen images</li> <li>• System should have 256 gray scales</li> <li>• Should have an alphanumeric keyboard with illuminated keys and status display or equivalent.</li> <li>• The system should have dynamic range over 200 dB &amp; scanning depth upto 35cm.</li> <li>• System should have an acquisition frame rate in 2D of at least 1000 Hz.</li> <li>• System should have advanced image processing algorithms to reduce the speckle and artifacts for improved image quality</li> <li>• Facility for independent steering of B mode on linear probe or equivalent</li> <li>• System should have elaborative measurement package for cardiac.</li> <li>• System should have one click optimization of Doppler</li> <li>• Should have tissue Harmonic Imaging in Phased array &amp; Linear Probe.</li> <li>• Anatomical M-mode for easier scanning in abnormally shaped &amp; positioned hearts.</li> <li>• Should have angle correction function</li> <li>• Should have Tissue Doppler Imaging with colour TDI to display direction &amp; timing of myocardial function.</li> <li>• Trapezoidal Imaging and Extended Field of view on Linear array Transducers.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Should have Integrated Stress Echo.</li> <li>• Full functional measurement facility and calculation should be possible</li> <li>• System should have direct connectivity to B/W thermal printer for printing images &amp; report</li> </ul>
5	The system should support broadband Phased and Linear array transducer technologies and frequency processing facility for the transducer should be 2- 15 MHz. The system should have a minimum of Three Active Imaging Transducer Ports.
6	<p>Should be flat panel monitor with tilt &amp; swivel</p> <ul style="list-style-type: none"> <li>• 17" or more LED display,</li> <li>• High Resolution,</li> <li>• Flicker free,</li> <li>• non-interlaced</li> </ul>
7	Cine loop review facility: Should be able to acquire and display up to 900 frames of 2D and colour images for retrospective review and image selection PW/CW Doppler facility in all imaging Phased Array Sector Transducer.
8	System should have Strain Quantification, Tissue Doppler Imaging (TDI) velocity mode quantification, to measure the myocardial velocity and derive the strain rate and stress echo.
9	System should have inbuilt Image Management, with facility for direct storage of Images and cine loop in the Hard Disk Drive and also thumbnail review to view, edit, measure Images, loops and also reports archive
10	<p>Others:</p> <ul style="list-style-type: none"> <li>• 5 GB optical disc drive / 500GB hard drive</li> <li>• Potential to store 300000 images</li> <li>• B/W thermal printer</li> <li>• Compatible with PC formats</li> <li>• Should have 3 USB 2.0 ports</li> <li>• Should have Ethernet probes</li> <li>• DVD/CD recorder with DICOM media transfer</li> <li>• Wheel locking mechanism</li> <li>• DICOM facility</li> </ul>
11	<p>Capability of on-site Upgradation without change of hardware and software</p> <ul style="list-style-type: none"> <li>• Intra-cardiac Echocardiography.</li> <li>• Multi plane TEE Transducer capability.</li> <li>• 3D &amp; 4D Imaging</li> </ul>

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12	<p>System should be supplied with the following transducers which should be latest generation wide band transducer,</p> <ul style="list-style-type: none"> <li>• Broadband Phased Array Transducer with Tissue Harmonic Imaging for adult cardiac imaging.</li> <li>• Broadband Phased Array Transducer for Neonatal cardiac imaging.</li> <li>• Broadband Linear Array Transducer with Tissue Harmonic Imaging for vascular imaging</li> <li>• Broadband Phased Array Transducer for Paediatric cardiac imaging.</li> </ul>
13	Electrical requirement : 230VAC, Single phase, 50/60 Hz
14	<p>Accessories :</p> <ul style="list-style-type: none"> <li>• Hard and soft copies of user and service manual</li> <li>• 4 swivel wheel cart based type trolley</li> <li>• Articulated monitor arm</li> <li>• Integrated PC module</li> </ul>
15	Standard warranty period: Three years standard warranty and Two years free labour AMC must be provided
16	Should also be required equipment demonstration
17	Technical Brochure hardcopy must be provided