

Digital Colour Flow Ultrasound System

The system should be Platform mounted- mobile unit having latest state of the art fully digital US equipment capable of performing 1-cardiac color doppler echocardiography ,2- abdominal and pelvic imaging in adults and imaging of small parts (thyroid, orbit, breast, testis etc.)3- suitable for vascular imaging 4-in near future for endocavitary imaging (rectal and vaginal), musculoskeletal, transcranial and Imaging.
Specifications are-

- 1 - System should have facility for real time compound tissue harmonic imaging preferably with all transducers.
- 2- Should have trapezoidal imaging and steerable imaging for 2D, color and Doppler with linear probe
- 3- Pan and zoom facility with high resolution results in both live and frozen images with facility for pre and post processing with cine loop review of images in all modes.
- 4- System should have advanced image processing algorithms to reduce the speckle and artifacts for Improved image quality.including software for abdominal,pelvic (obs&gyn) and cardiac and vascular imaging..
- 5- Alphanumeric Key board with Illuminated keys and status display and extensive software calculation packages for all areas of imaging. Please give details for the unit quoted.
- 6- High resolution monitor 17 Inches /15 Inches .
- 7- Should have a minimum of 2 active ports with direct switching from console.
- 8- Should have inbuilt Image management facility with built In hard drive facility for digital storage and retrieval of B/W and colour image data(both frozen and cine loops) and on removable media (CD, DVD) In all standard medical formats like DICOM. Archive should have multi-session inbuilt CDRW . Please give details of storage capacity of built in hard drive of the system.
- 9- Should have direct connectivity to laser jet colure printer and thermal printer for printing images and report.
- 10-An exclusive UPS (online) is required to be provided for this machine Online Voltage Spike Protector make of desired capacity
- 11- operators Training on the machine after installation for 6 days.
- 12.-Essentially required two probes 1st -general curved probe-2nd -cardiac probe having broad band facility
optional Probes –3rd-linear and 4th-endocavitary probe having broad band facility to be quoted separately

Probe Description

- (1) GENERAL CURVED PROBE
Minimum frequency range 2 to 5 MHz
Capable of Harmonic and Pulse Inversion Imaging
Colour and Doppler support
Tissue Harmonic Imaging
- (2) CARDIAC PROBE & ECHOCARDIOGRAPHY
Probe frequency range $\geq 2 - 5$ MHz
Facility of Automated Ejection Fraction
Doppler and Colour support
Continuous Doppler Enabled
- (3) LINEAR PROBE
Minimum frequency range $\geq 7.5 - 8$ MHz to 12 MHz (Lower frequency range adjustable)
Spatial compounding
Support colour and Doppler
Beam steering
Virtual formatting facility (Elasticity imaging desirable)
- (4) ENDO CAVITARY PROBE
FREQUENCY RANGE 7.5 to 12MHz

System should be quoted in the the following order.

- 1- Basic cost of machine .with two probes ie 1.general curved probe2nd cardiac probe including black and white thermal printer for image print out,WITH UPS to support all functions of the equipment
- 2- Cost of Broad band linear vascular and endocavitary probe separately

General Instructions to the vendor

- 1- Demonstration of machine quoted is mandatory and should be arranged by vendor at nearest location to hardware
- 2 - Installation of machine at BHEL Main Hospital Haridwar
- 3- 1 years guarantee with spares including transducers
- 4-. After sales service should be at call within 24 hours. Provision of AMC to be made in the Supply Order, to be enforced after the mandatory warranty/ guarantee period
- 5- Supplier must ensure availability of expertise service and maintenance. Spares availability and repair for next 10 years must be assured.information for the same should be given in writing
- 6- All information in the tender document must be supported in the product data sheet.
- 7 - 2 (Two) sets of operation and maintenance manuals with complete circuit diagrams.
- 8- Equipment should be suitable to operate on BHEL power supply of 230 V+ 15 percent 50 MHz + 3 per cent single phase 6- Supplier must quote all

material / facility / service required for satisfactory installation and commissioning of equipment BHEL Scope if any to be mentioned specifically. Anything not mentioned specifically but required for satisfactory commissioning of equipment will have to be arranged by supplier.

- 9 - Supplier quoting the equipment as a sole selling agent of their principal should submit authorized certificate from their principal.
- 10-. Full particulars i.e. specification, literature and / or drawing wherever applicable should be submitted along with the quotation. The brand and 'Make' name must be indicated