



Directorate of Animal Husbandry & Veterinary  
Khatla, Bungkawn Road  
Ph: 0389 - 2334395/2335267/2334451  
Fax: 0389-2333234  
Email : mizalivety@gmail.com

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No. B.15011/16/2017 - DTE(AH&V)  
GOVERNMENT OF MIZORAM  
DIRECTORATE OF ANIMAL HUSBANDRY & VETERINARY  
MIZORAM : AIZAWL

Dated Aizawl, the 25<sup>th</sup> April, 2022

TENDER NOTICE

The Governor of Mizoram is pleased to invite Rate Quotation Tender from interested reliable Firm for supply of the following Equipments for District AH & Vety Hospital Sialha, Champhai and Kolasib. Last date for submission of Tender to the undersigned is till 20<sup>th</sup> May 2022 ; 1:00 PM and will be opened at 2:00 PM on the same date. Details can be had from the Office of the undersigned during office hour on all working days.

Sl.No.	Name of Equipments
1.	Revolving Chair (Bravo)
2.	Office Tables (T-31)
3.	Steel open rack (6'x3')
4.	X-Ray Machine
5.	Ultrasound (Portable)
6.	Visitor Chair (CH 1018)
7.	Steel Almirah (6'.5" height)
8.	Consumable items (Catgut, Black braided silk, Cotton wool, Surgical blade, Bandage, Antiseptic ointment, Local Anaesthesia)



*(Signature)*  
( Dr. LALREMLIANA )

Director

Animal Husbandry and Veterinary  
Mizoram : Aizawl

Memo No. B.15011/16/2017 - DTE (AH&V)

Dated Aizawl, the 25<sup>th</sup> April, 2022

Copy :-

1. The PS to Hon'ble Minister, AH & Vety Department, Govt. of Mizoram for favour of information.
2. The Secretary, Govt. of Mizoram, AH & Vety Department for information.
3. The Director, I & PR, Govt. of Mizoram with a request to arrange publications of Tender Notice to be published in 3 (three) leading Local News paper in 3 consecutive issues.
4. Notice Board.

Director

Animal Husbandry and Veterinary  
Mizoram : Aizawl

**The Tender must be supported with the following documents –**

1. GST Registration
2. Pan Card of the Bidder
3. IT returns and financial statement for the last one year i.e. 2021-22
4. Authorized Certificate must be produced obtain from dealer/manufacturer
5. The Bidder should have qualified persons/ Engineers for Installation of X-Ray and Ultrasound Machine and Biodata of such person should be submitted in different sheet.
6. The Tenderer should submit technical Bid and Financial Bid
7. Earnest money 5% of their bidding amount in the Form of Demand Draft in favour of The Director, Animal Husbandry & Veterinary, Aizawl, Mizoram should be submitted the Tender quote.
8. Enclose Affidavit on Rs. 100/- Non-Judicial Stamp regarding Bidder is not black listed by any Government or its agencies.
9. All Tender Documents must be Stamp and Signed in all pages.
10. Any legal dispute/litigation arising out of this Tender of forms, The Court of Law at Aizawl shall have the jurisdiction to adjudicate the same.



**SPECIFICATIONS FOR A PORTABLE ULTRASOUND SYSTEM FOR ANIMALS**

1. Should be a latest portable ultrasound system under current production
2. Should be capable of performing abdominal, obstetric, cardiac, endocavitary and musculoskeletal scanning in small and large animals using appropriate probes
3. The system should come with species specific (at least for cattle/buffalo, sheep, goat, dog and horse) calculation packages (at least gynecology and obstetrics) for veterinary use.
4. The system should be able to operate on external AC line as well as on an inbuilt battery having a backup of at least 90 minutes with full functionality.
5. System should have following modes: Real time 2D, M-mode, Pulsed wave Doppler, Color flow imaging, Power Doppler and Tissue Harmonic imaging with duplex mode simultaneity.
6. System should have minimum 15" high resolution flat LED/LCD monitor.
7. System should have speckle reduction technology with noise and artifact reduction for improving tissue clarity and margin definition.
8. The system should be able to support curvilinear, phased array, linear and endocavitary transducers.
9. The system should be accompanied by two transducers- (i) Broadband microconvex multifrequency transducer having a frequency range of 2-8 MHz ( $\pm 1$  MHz); (ii) A broadband linear multifrequency endorectal transducer having a frequency range of 5-10 MHz ( $\pm 1$  MHz)
10. System should have Cine for at least 256 frames
11. System should have internal memory to save at least 25000 images.
12. System should have facility for pan and zoom on live and frozen image.
13. PW Doppler analysis in Auto & Manual mode, Variable sample volume, Selectable wall filter, Angle correction
14. System should have inbuilt USB port with capability to transfer images and video clips from the system to the USB drive
15. System should come with latest DICOM available at the time of delivery.
16. System should be approved by appropriate authority.
17. **Accessories to be supplied:** B/W Thermal printer of Latest model (with CE or FDA mark), Free Software upgrade(s) during the period of Warranty & AMC, 2 External Hard Disk of at least 1 TB capacity, carrying case.
18. Warranty of 2 years for the machine (including the probe) should be provided.
19. Vendor should attach the list mentioning the installations during the last 5 years.
20. Compatible sturdy trolley to accommodate the machine, thermal printer and triple transducer connector
21. Full onsite warranty for 3 years and product support for next 10 years from the date of installation of the system. Kindly quote the rates of AMC for next 5 years after the end of warranty.
22. At least 2 onsite trainings for the faculty after the date of installation will be provided by the firm

**Specifications of Mobile Digital Radiography System (100mA).**

Mobile X ray machine with Flat Panel Detector (FPD) system for General Radiography to be used for bed-side and ICU's should be offered. System should be capable of taking the complete range of radiographic examinations with the following Specifications & Configuration.

**i) X RAY GENERATOR**

- The x-ray generator should have output of 100mA (8KW) or more
- The control panel should be microprocessor based feather touch panel with LCD display.
- The control panel should have digital display of KV, mA, mAs or Secs.
- The radiography KV should be 40 to 100KV or more with increment of 1KV steps.
- The radiography mA should be from 40 to 100mA or more.
- The radiographic mAs should be from 0.1 to 200mAs.
- The control should have Anatomical Program selection of various body parts.
- The control should have overload protection of x-ray tube.
- The x-ray tube should be Stationary anode with focal spot of 2.8mm or less
- Inherent filtration should be 0.5mm Al.
- It should have indication for error, X-Ray ON & Mains,
- The double slot manual light beam collimator should be supplied with the system, it should have auto cut off system.
- Control panel should have exposure function and double step exposure switch should also be provided with cord of 3 meters or more.

**ii) X-RAY STAND**

- It should be of compact designed & light weight for easy maneuverability.
- It should have vertical movements of tube arm.
- It should have spring balanced arm for easy patient positioning.
- It should have appropriate hand brake for easy braking and control of the system while moving.
- It should have locking arrangement to park the tube arm in extreme lower position while moving the machine on Ramps, Lifts & Wards etc.
- It should have Detector storage compartment.
- The X-ray stand should have arrangement to mount the Laptop.

**iii) POWER SUPPLY**

The unit should runs on Single Phase 230 volts, 20Amps, 50Hz.

Auto compensation of Line Voltage Compensation of  $\pm 10\%$ .

**2) Flat Panel Detector (FPD with TFT technology):**

Single Wireless Flat Panel Detector system (FPD) of Size 14"x17" or more should be offered.

The Scintillator material of the detectors should be made up of Cesium Iodide and sensor with Thin Film Transistor (TFT) and Amorphous Silicon technology.

The detectors should be capable of doing out of bucky radiography and also Lateral supine Radiography must be possible.

The detectors offered should have on board memory capable of storing up to 100 images.

The detectors should have a minimum spatial resolution of 3 lp /mm or more.

Detector array Size: Should be a minimum of 2.3K x 2.8K pixels or higher.

Pixel Pitch: 150 microns or less.

A to D conversion: 16 bits.

The detector offered should be light in weight with less than 4 kgs, enabling ease of use for operations and easy positioning at the time of out of bucky exposures.

Images pre-viewing should be available within 5 secs after exposure and the cycle time should be less than 12 seconds.

The battery must be of latest Lithium Ion type. 2 Nos Batteries along with battery charger should be provided.

Detector offered should be capable of handling 150 or more exposures or 5 hours of operation in single full charge.

The detectors should have Automatic Exposure Detection as standard feature.

The detector should be able to work at normal room temperature and humidity. The detector system should not require frequent calibrations on daily start-up.

Offered detector should have load bearing capacity of 150 kgs or more.

The detector should be able to easily be disinfected after use with COVID patient.

**3) Image Processing Console cum workstation:**

The DR Console should be offered with Laptop of 15" or more. Laptop should be mounted on the Mobile X-ray along with anti-theft device/locks.

Windows and Level Adjustments

Annotations must be possible

Previews of images should be available in about 5 Sec or less

Zooming, ROI, Image Cropping and grid removal function should be available.

Soft tissue processing must be possible

Bone Suppression Imaging (removal of clavicle bone and ribs) should be available so that a clear view of the chest is visible which is helpful for the examination of the COVID patients more effectively.

System should be offered with orthopedics measurement tools

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- Should offer capability of local image storage
- Should be capable of connecting minimum of 2 Flat panels simultaneously
- Should be capable of connecting directly to the Dry Laser printer
- Should have capability to push images to location(s) of choice such as:  
Workstations  
PACS  
External Storage Devices of 4TB – 4 nos. (2 Western digital & 2 Seagate Hard Disk)  
DICOM Printer(s)

**4) Accessories – To be offered as standard:**

Following accessories should be supplied with the machine at the time of installation.

- Lead Apron 0.5mm Pb equivalent – 4 nos.
- Sonad Shield – 2 nos.
- Thyroid Shield – 4 Nos.

**5) OTHER REQUIREMENTS:**

- Detector and Console Software should be from the Principal manufacturer.
- The offered detector (FPD) should be CE & USFDA Approved and the X-ray should be BIS compliant and AERB Type Approved.
- Easy availability of spares in India.
- Trained engineers to maintain and support the system.
- All specifications to be provided with original product data sheet/catalogue.
- Offered system should have 1 years warranty from date of installation.

## Computerized Radiography System

CR System should have following modules/ components

1. Image recording system (cassettes and reading plates)
2. Image reading system (reader/digitizer)
3. Identification and CR Processing work station - detailed below
4. Dry imager
5. In-line UPS of suitable capacity to provide power support to the CR system for minimum 30 minutes, in case of main power failure

### **Image recording system**

The following sizes of compatible imaging plates/cassettes should be supplied with the unit

- 14" X 17": 3 nos.
- 14" X 14": 3 nos.

### **Image reading system**

- Should have a resolution of 5 pixels/mm (minimum) for standard resolution
- The CR Reader/digitizer should be able to process 45 or more image plates/ hour
- or more of the largest size cassette
- Gray Scale resolution: CR Reader/digitizer should have a minimum resolution of 12 bits/pixel for images sent to CR Processing stations
- Should be able to read the plates of all the standard sizes

### **Identification and CR Processing workstation**

- Processing station must have at least 8GB RAM, at least 1 TB HDD, Processor i5 or better and 19 inch clinical grade monitor. The PC hardware and monitors must be from reputed brands like Dell, HP ETC.
- Processing server capable of identification of patient demographics to the acquired images. Else a separate identification station must be provided.
- The server and/or ID Station must be DMWL (DICOM Modality Work list) compliant to access patient and study data from HIS or RIS.
- It should provide display of acquired image with greater details of demographics viz, patient/ study listing for easy access
- The server must provide full amount of post processing features viz. geometric corrections, window level algorithms, annotation like markers, predefined text, drawing lines and geometrical shapes, multi-scale image processing, measuring distance and angles, shuttering, histograms, zoom, grey scale reversal, edge enhancement, noise reduction etc.
- Should facilitate full-fledged DICOM printing and should be able to print multiple formats of patient study.

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- Should be equipped with DICOM CD writer for transferring image.
- Should be able to store image on external device viz CD or Pen drive etc

**Dry imager**

- The system must have a dry imager/Thermal printer without need of any wet chemistry
- It must be DICOM compatible allowing multiple modalities to be connected at a time
- The system must be able to print minimum 60 film or more/hour depending on size
- The imager must have spatial resolution of 500 dpi minimum.
- The system must have contrast resolution of 12 bits/pixel or more.
- The imager should support day light loading of films
- System should be multiframe loading

**Suggested firms**

- 100 mA Xray machine – Siemens, Allengers, GE, Philips
- CR system – Konika-Minolta, Carestream, Fuji



## SURGICAL INSTRUMENTS

Sl.No.	Items
1	Nylon suture (0)
2	Nylon suture (2-0)
3	Catgut (0/2-0/4-0)
4	Black Braided Silk
5	Cotton thread
6	Allis tissue forceps (8")
	Allis tissue forceps (6")
	Allis tissue forceps (4")
7	Artery forceps curve (8")
	Artery forceps curve (6")
	Artery forceps curve (4")
8	Artery forceps straight (8")
	Artery forceps straight (6")
	Artery forceps straight (4")
9	Mosquito artery forceps (Straight & Curve)
10	Thumb forceps rat toothed (6")
11	BP handle No. 4
12	BP blade No. 24
13	Needle holde (4")
14	Pointed Scissors (6")
15	Whelping forceps
16	Draper clips/forceps
17	Cotton roll 500gms
18	Intestinal clamps
19	POP (10cm)
20	Enema set
21	Rolled bandage (10cm)
	Rolled bandage (5cm)
22	Diazepam (2ml ampoule)
23	Ketamine (10ml vial)
24	Xylazine
25	Suturing needles (No. 5)
	Suturing Needles (No. 10)