

No. YAN/ADM/885/2/2019
Embassy of India
Yangon

Yangon, the 19th November, 2019

TENDER NOTICE

Subject: Supply and Installation of Door Frame Metal Detector (DFMD, Walk Through Metal Detector) and Baggage Scanner at Embassy of India, 545-547, Merchant Street, Yangon, Myanmar

S. No.	Details
1.	Chapter I : Tender Details and General Instructions
2.	Chapter II : Technical Bid Proforma
3.	Chapter III : Financial Bid Proforma

(KIDNLY NOTE THAT SPECIFICATIONS FOR BAGGAGE SCANNER AND DFMD ARE GIVEN IN ANNEX 1 AND ANNEX 2)

Chapter I - Instructions to Bidders

1. Bids from experienced & registered firms, complete in all respects should be submitted in sealed envelopes addressed to the Head of Chancery, Embassy of India, 545-547 Merchant Street, Yangon, Myanmar, in person, or by mail or courier to reach before the deadline of **1600 hrs. on Thursday, 12th December, 2019.** Two Separate sealed envelopes containing Technical Bid and Financial Bid proposals must be sent. These would be enclosed in one envelope that should be clearly marked "Tender for Supply and installation of Door frame metal detector, Baggage Scanner for Embassy of India, Yangon". All tenders received after the deadline will be summarily rejected.

2. An amount of USD 1,000/- (**USD one thousand only**) in the form of **Pay Order** (to be valid for five months from the date of publishing the tender) **or Cash** payable to "**Embassy of India, Yangon**" towards Earnest Money Deposit (EMD) should be enclosed with Bid. Embassy will issue a receipt for the EMD. In case the EMD is not submitted, the bid shall not be considered and shall be rejected summarily. The EMD will be refunded to the unsuccessful bidders after award of contract. For successful bidder the EMD will be refunded only after supply of the machine to Embassy.

3. Only Original Equipment Manufacturers (OEM) and their authorized dealers along with authorization certificate (To be attached) having minimum 2 years of experience in the field of work of similar nature (i.e. experience of Supply, Installation, Testing and commissioning (SITC) of baggage scanner system AND DFMD)

4. All bidders should submit along with the Tender the following documents:

- i. Separate bids in the sealed envelopes in the prescribed Technical Bid Document and Financial Bid Document (proforma attached in chapter II and III).
- ii. Both the above documents must be signed by authorized signatories of the bidding firm with a seal / stamp.
- iii. Self-attested photo-copy of registration of the company / firm / proprietorship with the concerned Myanmar authorities.
- iv. Annual Report (where statutorily required to be filed) and Financial Reports for the last 2 years.
- v. Details of experience in the field of supplying security equipment to with Embassies / reputed Companies / Government agencies.

5. Technical Conditions/scope of works shall be asunder:

1) Supply and installation of:

- i) Door frame metal detector and
- ii) Baggage Scanner

Providing operational training of these security equipments to present Security Personnel in the Embassy.

6. The bidder should be a company or firm duly registered with the concerned authorities in Myanmar. Bidder must be a firm with a past record of providing security equipment / services in Myanmar. Embassy of India reserves the right to reject bids from firms who are blacklisted by Governments of Myanmar or India for poor performance in the past, or those who do not have adequate experience in the field of providing security equipments.

7. The bids will remain valid for 90 days from tender closing, for award of contract after obtaining approval of competent Indian authorities. No price escalation would be allowed.

8. The successful bidder has to sign a contract with the Embassy of India in an appropriate form for execution of the contract.

9. First the Technical bid will be opened and the pre-qualification of the bidder will be assessed and then financial document of only those bidder[s] who meet the technical criterion will be opened.

10. The winning bidder would be responsible for supply and installation of Door Frame Metal Detector (DFMD) and baggage scanner at Embassy of India, Yangon near main entrance inside the Building or as advised by the competent authority in the Embassy.

11. The winning bidder would be required to dedicate one supervisor / manager who can be contacted for all queries / requirements.

Commercial terms / instructions

Sr No.	Description	Embassy's Terms
1	Validity	90 days from date of opening the tender
2	EMD	US\$1000/-
3	Terms of payment	(a) 75% of the quoted rate pro-rata against delivery of materials after checking at site (b) 20% on installation and commissioning, after checking / verification testing and training at site. (c) 5% of the quoted rate after one year of warranty period.
4	Prices	Should be quoted inclusive of all taxes, duties, octroi, entry tax, Transportation etc as per financial bid proforma.
5	Guarantee / Warranty Period	12 months from date of successful handing over, installation, testing and commissioning.
6	Service after sales	Free of cost during the Warranty period. Annual Maintenance Contract (AMC) after completion of warranty period.
7	Completion period	02 months from 10th day after award of contract.
8	Liquidated damage for delay in supply / installation	1% per week of the contract value (excluding AMC charges) subject to maximum 10% of contract value (excl AMC).
9	Time allowed for rectification	Maximum 24 Hours on receipt of complaint and penalty @ USD 20/- per day
10	Service facility	Shall be available at Yangon where the Baggage Scanner is to be installed and shall be approachable on telephone/ mobile.
	Address of Service centre at Yangon	
	Contact Person's Name and Mobile No.	
	Name and Contact details with number of Service Head at Yangon	

Important Dates for Tender

1. LAST DATE FOR BID SUBMISSION: 1600 HRS, Thursday, 12th December, 2019
2. DATE OF OPENING TECHNICAL BIDS: 10.30 HRS, Friday, 13th December, 2019.
3. DATE OF OPENING FINANCIAL BIDS: 1530 HRS, Friday, 13th December, 2019.
4. Date for seeking clarification: 14.30 to 16.30 hrs. on 25 and 26 November, 19
5. EVALUATION CRITERIA: The Tender Evaluation Committee [TEC] will evaluate the Technical information individually using the following criteria:
 - a) The Organization's relevant experience for the Assignment.
 - b) Quality of SERVICE plan and methodology for undertaking the job.
 - c) Qualifications and experience of the staff proposed.
 - d) Past track record.

Bids may be submitted physically or by courier / post to: Head of Chancery, Embassy of India, 545-547, Merchant Street, Post Box No 751, Yangon.



(Sankar Nandi)
Second Secretary & Head of
Chancery
E-mail: hoc.yangon@mea.gov.in
Ph : 0095-1-391219/243972

CHAPTER II

TECHNICAL BID PROFORMA

Supply, Installation, Testing, Commissioning Training & maintenance of
baggage scanner system at Embassy of India, Yangon

Name of Company

Address

Contact details

Sr. No.	Embassy's ELGIBILITY CRITERIA	
1.	<p>a) Only Original Equipment Manufacturers (OEM) and their authorized dealers along with authorization certificate (To be attached) having minimum 2 years of experience in the field of work of similar nature (i.e. experience of SITC of X - Ray baggage scanner system AND DFMD system)</p> <p>b) The Agency should have supplied and installed at least five X - RAY Baggage Scanner systems of around \$ 20000/- value each, during last two years.</p> <p>c) Have the authorized service set up in Yangon for not less than two years for rendering after sales service.</p>	
2	OEM's certificate certifying that all spares and service contracts, warranty and AMC period will be their responsibility in case the supplier is unable to honour the Terms of Contract as per the Tender Document .	
4	Work experience & Completion of similar works of specified value during the specified period (enclose copies of purchase orders)	
5	Annual Turn- over during the last two years.	

6.	Name(s) and address (es) of the Embassy / UN organization / Government organization / big corporate houses to whom X-Ray baggage Scanner has been supplied.	
7.	Name(s) and address(es) of the Clients and their present contact executives in Yangon.	
8.	Name and address of Local office and service centre at Yangon	
9.	EMD USD 1000/-	
10.	IS THE BAGGAGE SCANNER MEETING THE SPECIFICATIONS AS GIVEN IN ANNEX 1	
11.	IS THE DFMD MEETING THE SPECIFICATIONS AS GIVEN IN ANNEX 2	

Note: Please attach the copy of documents (Details mentioned without relevant / necessary proof shall not be considered)

Date:

Signature and seal of the office:

Place:

Name:

Designation :

Chapter II - TECHNICAL BID PROFORMA FOR DFMD

(MULTIZONE)

1. Name of the firm:
2. Address of the Registered Office:
3. Correspondence address:
4. Contact details:
Telephone:

Fax:

E-mail:

Sl. No.	Requirements	Reply	Remarks, if any
1.	a. Brief introduction of the company		
	b. Previous experience in the field (minimum of three years)		
	c. Registration Certificate & license for the services		
2.	Qualification and experience in supply of security equipments — DFMD		
3.	a. Details of organizations presently to whom these equipments have been sold — DFMD,		
	b. Details of past contracts of security equipments undertaken by the firm		
	c. Testimonials [Clients' letters / certificates etc.]		

Note: Please attach the copy of documents (Details mentioned without relevant / necessary proof shall not be considered)

Date:

Signature and seal of the office:

Place:

Name:

Designation :

Chapter III - FINANCIAL BID PROFORMA

1. Name of the firm:
2. Address of the Registered Office:
3. Correspondence address, contact details – phone number and email:

Baggage Scanner

Sr. No	Description	Qty.	Rate (US Dollar)
1	Supply, Installation, Testing, Commissioning and Training of Baggage Scanner System (as per specification given in Tender Notice)	01 no.	
	Taxes if any		
	Sub total (A)		
2	Compressive AMC for 3 years after successful completion of guarantee/warranty period of 1 year (12 months) from date of successful Supply, Installation, Testing and Commissioning of the systems. The company should be in a position to supply spare parts for three years after the warranty period		
	a) 2 nd Year	01 no.	
	b) 3 rd year	01 no.	
	c) 4 th Year	01 no.	
	Taxes if any on AMC (a,b,c above)		
	Sub total (B) =		
	Total Amount all inclusive (A+B) for Baggage Scanner		
	Total amount in figures (in USD)		

Note: L1 price would be considered as the sum of A and B above

DFMD

Sr. No	Description	Qty.	Rate (US Dollar)	Amount (Rs.)
1	Supply, Installation, Testing, Commissioning and Training of Door Frame Metal Detector(as per specification given in Tender Notice)	01 no.		
	Taxes if any			
	Sub total (A)			

2	Compressive AMC for 3 years after successful completion of guarantee/warranty period of 1 year (12 months) from date of successful Supply, Installation, Testing and Commissioning of the systems. The company should be in a position to supply spare parts for three years after the warranty period			
	a) 2 nd Year	01no.		
	b) 3 rd year	01no.		
	c) 4 th Year	01no.		
	Taxes if any on AMC (a,b,c above)			
	Sub total (B) =			
	Total Amount all inclusive (A+B) for Door Frame Metal Detector			
	Total amount in figures (in USD)			

Note: L1 price would be considered as the sum of A and B above, Embassy reserves the right to purchase either one or both the machines (i.e. baggage scanner and DFMD) from one supplier/two different supplier.

Date:

Signature of the Authorised Signatory

Place:

Seal

Specifications of Baggage Scanner

1. Resolution : 42 SWG or better
2. Tunnel Size : Shall be minimum 600mm X 400mm with 10% variation only on higher side.
3. Penetration : $> = 30$ mm Steel.
4. Voltage : 180 – 260 V, 50 Hz single phase.
5. **Conveyer Belt**
- 5.1 Speed should be at least 0.2 meters per second or better.
- 5.2 Maximum load should be 160 Kg.
- 5.3 Conveyor belt height should be at least 750 mm.
- 5.4 Facility of bi-direction scanning be available.
- 5.5 Idle SS rollers to be provided with input/out frames at both ends of the tunnel.
6. **X-Ray Generator**
- 6.1 Cooling – Sealed oil bath.
- 6.2 Anode Voltage $> = 160$ KeV
- 6.3 Tube Current $< = 1$ mA
- 6.4 Beam divergence – 60 degrees. The x-ray beam divergence should be such that the complete image of maximum size of bag is displayed without corner cuts.
7. **Image Processing**
- 7.1 Sensor – Folded array
- 7.2 Grey Levels $> = 4096$
- 7.3 Display – High resolution SVGA, 22" TFT, LED Colour monitors, Flicker-free, minimum 1920 X 1080 pixels full HD display 30 watt and low radiation.
- 7.4 Beam divergence – 60 degrees.
8. **Computer configuration for image Storing and archiving.**
- 8.1 Latest generation compatible with X-Ray machine having the following minimum features or better.
- 8.2 Processor: Core i3 or better available in market.
- 8.3 Hard Disk: 350 GB or better.
- 8.4 CD/DVD Drive R/W
- 8.5 RAM 3 GB or better.
- 8.6 UPS: Reputed make online UPS like Tata libert, APC, Microtek etc. with minimum 30 minutes backup on full load by using SMF batteries.
- 8.6.1 Capacity – Commensurate capacity as per load.
- 8.6.2 Voltage range – 180-260 V, 50 Hz single phase.
- 8.6.3 Output voltage – 230 VAC $\pm 1\%$
- 8.6.4 Transfer Time – 0 ms
9. Zoom facility should be available to magnify the chosen area of an image eight times (X8) or more. Image features shall be key board controller.
10. The machine should be film safe.
11. The machine should have features of multi energy X-ray imaging facility (140 KeV approx.) where materials of different atomic number will be displayed in different colours to distinguish between organic and inorganic materials. With this method should be possible to distinguish high density organic materials including explosives. Machines should have variable colour or material striping to facilitate the operator to monitor images of organic materials for closure scrutiny. All suspicious items (explosives, high density material, narcotics) should be displayed in one mode and that should be online.

12. Facility for variable contrast must be incorporated to allow enhancement of lighter and darker portion of the image.
13. If the machine fails to penetrate an item, then an alarm (visual and audio both) should be generated to notify the operator.
14. The **threat image projection (TIP) system** software to be incorporated as per details given below:
 - 14.1 TIP software facility shall be incorporated in the offered x-ray machines to assist supervisors in testing the operator alertness and training X-ray screeners to improve their ability in identifying specific threat object. The system will create a threat object and the same will be superimposed on monitor screen while a bag is being screened. To acknowledge that the operator has seen the false object, operator must press the control panel key that will cause the computer generated threat object to disappear from X-rayed bag image on the VDU screen. Each operator's action shall be recorded in the hard disc of the computer for the auditing purpose by the supervisor or other authorized person.
 - 14.2 **Design of the System**
 - 14.2.1 TIP software should be compatible with other X-ray technologies such as automatic reject unit, dual x-ray screen technologies, automatic threat recognition system etc. All x-ray image functions must be available at the same time along with the TIP.
 - 14.3 **Image Library**
 - 14.3.1 The TIP facility should have an image library containing at least 100 explosive devices, 100 knives and 100 firearms in various sizes, shapes, locations and orientations. However, the system shall have facility to expand the library to incorporate additional images by user without assistance of the manufacturer.
 - 14.3.2 The image library should contain images of threats at different orientation both plane and end on orientation should be used. Although these will be assigned different file names and reference, it must be possible to cross reference these as the same threat. All threat images protection images must be realistic – representative and non distinguishable from real threat items.
 - 14.4 **Time Interval**
 - 14.4.1 Programming facility shall be available to project threat images in different intervals. The time period for threat image as well as image mix in percentage shall be user programmable e.g. software shall select 40% images of explosive devices, 35% of fire arms & 25% of knives or random items etc.
 - 14.4.2 Once the screener has responded to identity the computer generated threat image, it should remain on the screen for a predefined user programmable time for analysis. The image should be highlighted, upon identification and feedback message shall be visible to the screener.
 - 14.5 **System Administration**
 - 14.5.1 The threat image projection facility shall have details of user data base such as Venue of function, Name of organization, Name of Screener, user ID number, level of access such as screener, Administrator, Maintenance schedule and password etc.
 - 14.5.2 Access to start up menu should be restricted only to the authorized individuals. A log in procedure by means of password or security key could achieve restricted access to each of the comment. The log in procedure should not take longer than 20 second. The system should have facility to bypass the TIP facility, if programmed so by the system administrator. It is to be ensured that the TIP software shall not be hindrance to normal functioning of the x-ray machine.
 - 14.5.3 When the operator logs in or logs out, message should be displayed on the Video Display Unit (VDU) screen to confirm that he/she has been correctly logged in or logged out.

14.6 Feedback Report

- 14.6.1 The threat image projection should be capable of giving feedback HIT MISS or FALSE Alarm message. No message will be presented if a screener correctly passed as clear bag.
- 14.6.2 A HIT message to be presented when a screener has correctly identified a threat image projection image. A MISS message shall be presented when screener fails to identify the TIP image. A False alarm message shall be given when screener incorrectly indicate TIP image when in fact no threat image projection is present. The feedback should clearly indicate in a screen that a TIP object has been correctly identified/TIP object has been missed/no TIP object was present. Information should be recorded in the data base.
- 14.6.3 Different colour coding shall be used for feedback to the screener. It is recommended that colour code RED for MISS, Green for HIT and Yellow to False Alarm or interrupt be used.
- 14.6.4 The system shall automatically prepare the daily log of events for each shift and for each screener performance. TIP log shall include particulars of Venue, XBIS, Name of Screener, Time and date of threat image, whether threat image was successfully identified or missed etc.
- 14.6.5 The report on threat image projection system may have date and time (from – to –) as per requirement, Screener particulars and decision/outcome i.e. MISS, HIT or False Alarm in percentage as well in absolute numbers, number of bags screened, categories such as explosive devices knife or weapon etc.
- 14.6.6 As a standard practice, daily/weekly/monthly report shall be retrieved. Report shall be for any given time and period, as per command.
- 14.6.7 All data should be stored on the system for a minimum of two months after it has been downloaded. No individual regardless of access rights to the threat image projection components would delete or amend any of threat image projection data or time i.e. threat image projection data on the actual X-ray machine will be read only file.
15. Control desk with security housing and locking provision should be available. The entry of operator personal identification number should be possible through keyboard.
16. Maintenance reminder should be available.
17. Display: Date and Time and Operator ID.
18. Baggage counter preferred.
19. Inverse video.
20. Black and white image.
21. Facility of image enhancement should be available.
22. Machine should be capable of recalling 15-20 previous images.
23. It should have the capability of archiving 3000-4000 images.
24. In case of defective diode arrays, scanning should be disabled and error message should be displayed on the screen.
25. Copy of all softwares including x-ray software with recovery CD and passwords should be provided.
26. All software features of machine should be online and password protected.
27. System should work on one software only. All software features should be controlled from key board of machine only. Keyboard function should be user friendly. To enable/disable the software features, system should not be rebooted.
28. All models should have online recording facility and images can be recorded in external media like USB drive.
29. All models should have software controlled diagnosis report facility and system should be able to give printout.

30. The machine should be so designed that software enhancement can be easily implemented to take care of new technique in image processing and pattern recognition.
31. The operating temperature should be 0 degree C to 40 degree and storage temperature-20 degree C and 50 degree Celsius.
32. Anti rodent and dust proof cover must be provided.
33. The company manufacturing the equipment should have ISO certification for manufacturing and servicing of x-ray screening machines.
34. **Safety**
- 34.1 The machine must comply with requirement of health and safety regulations with regard to mechanical, Electrical and radiation hazards. The supplier/manufacturers should furnish Test Certificate from *any Reputed organization* regarding radiation safety.
- 34.2 The radiation level should not exceed accepted health standard (0.1 mR/Hr) at a distance of 5 cms from external housing.
- 34.3 Lead impregnated safety screens should be available at either ends of the tunnel.
- 34.4 Dosimeter be provided for radiation checking.
35. Combined Test Piece (CTP): The manufacturer shall provide one set of CTP per machine for checking serviceability of the machine by the operator. The details of CTP are given below.
- 35.1 Combined Test Piece Requirements.
- 35.2 **Single wire Resolution (Test No.1):** The requirement is to display 42 SWG wire not covered by step wedge. A tick will indicate the visibility of appropriate wire. A set of un-insulated tinned copper wire of size 26, 30, 35, 38, 40 and 42 SWG should be placed on a Perspex sheet. The wires to be laid out in S Shaped curves. The wires should be placed behind varying thickness of aluminum. Metallic marker should be provided using high density material, so that SWG numbers in the Video Display Unit (VDU) are clearly visible.
- 35.3 **Useful Penetration (Test No.2):** The test defines what level of details can be seen behind a thickness of known material. The CTP should have different gauges of wire behind varying thickness of aluminum. The requirement of this test is that the 26 SWG wire is seen under second step wedge (5/16"). Tick on log sheet will indicate what wires are visible.
- 35.4 **Material discrimination (Test No.3):** The requirement is that different colours be allocated to the sample of organic and inorganic substances. With multi energy X-Ray it should be possible to distinguish between materials of different average atomic number. This means that organic and inorganic substances can be differentiated. The use of sugar and salt samples encapsulated on the test piece and various materials used in the construction of CTP should check the material discrimination facility. A tick should indicate that the sugar/salt samples are shown in different colour.
- 35.5 **Sample Penetration (Test No.4):** The requirement is that the lead be visible beneath 26 mm of steel. This test defines what thickness of steel the machine should be able to penetrate. The steel step wedge on the CTP should have steps of at least 2 mm from 16 mm to 30 mm with a lead strip to check that the machine is above or below the requirement. A tick in log sheet should indicate where a lead strip is visible.
- 35.6 **Spatial Resolution (Test No.5):** The requirement is that vertical and horizontal grating to be seen. This test defines the ability of the system to distinguish and display objects, which are close together. The CTP should have at least 16 copper gratings at right angles to each other. A tick in the log sheet should indicate the gaps in the gratings are visible.

35.7 **Thin Metal Imaging (Test No.6):** This tests the machine's ability to image thin metal. A number of thin metal strips of various thicknesses should be placed in row.

35.8 **Method**

35.8.1 The CTP is to be used as a quick routine test carried out daily to ensure that equipment is working properly and satisfactory image is obtained. The results of the tests should be recorded.

35.8.2 The CTP should be placed on the belt and passed through the belt at least once in a day before the baggage is screened or after the x-ray equipment is switched on to ensure that the equipment is working properly. If the image is satisfactory the equipment may be used.

35.8.3 The CTP may be viewed by using image enhancing facility till the operator is satisfied that the machine is working properly. The optimum position of CTP on the belt will depend on x-ray source and detector arrangements. This may be ascertained from the service engineer, if need arises.

35.9 **Results**

35.9.1 The best results taking both colour and black and white images into account should be recorded for a particular machine.

35.9.2 The results of test should be recorded giving information like date, time, machine number and type, supervisors name and other remarks.

35.9.3 Supervisory officer should carry out the tests once in a week and compare the results with daily test sheets. In case the images are not up to the standard, service engineer must be asked to rectify the fault. The machine may not be used when its performance is in doubt or not satisfactory in the opinion of the supervisor.

35.9.4 The record must be kept by the operator for one year. The records may be checked by the inspecting officers during this period.

36. **Warranty & Maintenance** - 01 years Warranty and Annual Maintenance Contract for 03 years. Sufficient spares should be available in stock with the supplier and certificate for availability of spares in *Yangon* for at least 3 years after the warranty period.

37. **Miscellaneous:** The firm should be able to provide the following along with the equipment:

- (i) One Test Sample (CTP) for each machine for testing during commissioning and during maintenance.
- (ii) Suitable voltage stabilizer with isolation transformer.
- (iii) Training tools – charts, slides, training brochure, training work model, blow up diagram, video films on demonstrations and use etc.
- (iv) Technical manual giving full description of the item. Practical training for at least 4 times in a year and continuing during the warranty period.
- (v) User's handbook and literature on preservation/maintenance as applicable.
- (vi) Procedure for packing, handling, transportation and storage.

Technical specifications of Multi-zone DFMD (water proof/ weather proof) decided

1. Technology : Suitable latest technology.
2. Dimensions : Detection area – Height: not less than 205 cm
Width : 72-80 cm
Depth : 57-60 cm
3. No. of zones : Minimum 8 Zones
4. Operational : User Selectable
Frequencies
5. Sensitivity : Adjustable
6. Zone sensitivity:
& adjustment : All zones individually adjustable.
7. Metal Detection: (i) Should detect
(a) Ferrous, Non-ferrous, Ferrite & Alloys.
(b) Uniformly in entire frame area.
(c) In all orientation and
(d) In walking speed of interception
(ii) *Pin point detection with indication at correct zone level
without interference/false identification of adjacent zones.*
8. Alarm : i) Audible alarm on detection with adjustable volume.
9. Display : Suitable anti-glare counter and zone display of DFMD –
readable to person with normal eye sight in day and night
time without any strain on eyes.
10. False Alarm rate: Less than 3%
11. Interference : i) Should not interfere with adjacent installed DFMDs
Suppression within a distance of 1 ft.
ii) Should not be affected by opening/closing of a
metallic gate in vicinity.
iii) Should not be affected by heavily reinforced floors/
roof tops / walls.
iv) Should not be affected by external RF transmission
and EMI (Electro-Magnetic Interference), (supported
by Test certificates from NABL or other accredited
labs from the country of origin of the equipment).
12. Capacity/ : 20 persons or more per minute Adjustable Traffic count is
throughput rate acceptable
13. Power Supply: (a) 220 VAC 50 Hz Mains \pm 10%

- (b) Rechargeable maintenance free internal battery for minimum 10 hrs operation with inbuilt charger (external batteries will not be accepted)
 - (c) Audio Visual low Battery indicator
- 14. Calibration : Inbuilt auto calibration capability.
- 15. Safety :
 - (a) The bidder shall submit a certificate from any accredited Indian laboratory regarding its adverse effects on human and machines. Harmlessness to magnetic media and heart pacemaker, pregnant women.
 - (b) Should conform to international standards of safety/radiations.
 - (c) Should be Data safe.
- 16. Self Diagnostics: User-friendly self-testing diagnostics to identify faulty condition.
- 17. Operating :
Ambience : Temperature – From 5 degree C to 55 degree C
Humidity – Upto 95% Non condensation.
- 18. Control Panel: Easily accessible, modular design with standard plugs and connectors. Adjustable control should only be activated on the insertion of a removable key or by password.
- 19. Construction : Construction should be confirming to IP 65 standards. Lightweight, Rigid, laminated side panels and cross piece, ABS plastic boots for panel protection, Base wheels for easy mobility & should be waterproof/ weatherproof and usable at outdoor locations. It should have a floor panel to attach both side panels to give stability & rigidity to the machine.
- 20. Warranty : Warranty for 4 years. Sufficient spares should be available in stock with the supplier from the manufacturer and certificate for availability of spares in Yangon for at least 3 years after the warranty period.
- 21. Accessories :
 - i) One Test sample for each machine for testing during commissioning and during maintenance.
 - ii) Training tools – charts, slides, training brochure, training work, model blow up diagram, video films on demonstrations and use etc.
 - iii) Technical manual giving full description of the item. Practical training at least 4 times in a year continuing during warranty period.
 - iv) User's handbook and literature on preservation/ maintenance as applicable.
 - v) Procedure for packing, handling, transportation, storage and battery replacement.
- 22. Counters : Counting of number of persons passing the sensing zone-inbound/outbound.