TENDER FOR SUPPLY, INSTALLATION, TESTING, COMMISSIONING OF SECURITY EQUIPMENT AT BARODA APEX ACADEMY, AHMEDABAD

TECHNICAL SPECIFICATION OF SECURITY EQUIPMENT

BANK OF BARODA,

Baroda Apex Academy Building,

Udhyog Bhavan, Sector – 11,

Gandhinagar – 382001, Gujarat

Item No.1

S. No.	Technical Specifications	
	General Requirement	
1.	X Ray baggage Scanning system (XBIS) should consist of x ray machine, image acquisition, recording, storage and display systems, fabricated structure of steel frame to house the machine with mobile heavy casters and stable levelling base.	
2.	The X-Ray Baggage Scanner should produce Multi colour view of the objects scanned based on the standard 4 colour coding to have a detailed information.	
3.	The machines should have **Artificial Intelligence based threat identification** capability to detect at least 35 major threats inside the scanned baggage along with confidence percentage of the machine.	
4.	The X-Ray Baggage Scanner should be equipped with **embedded entry and exit camera for capturing the face of the person putting the bag on the conveyor.** The live feed should also be visible on the operator screen. All these camera feeds should be tagged along with the scanned image of the bag with date and time stamp for traceability & analysis.	
5.	**Embedded Camera Specification:**	
	Sensor type	1/ 2.7" Progressive scan CMOS
	Camera	2 Ch
	Video Compression standard	H.265/ H.264/ MPEG
	Maximum Image Resolution	1024 x 1280
6.	The machine should have **networking capability to connect with the central monitoring station** so that the X-Ray image and feed from embedded cameras can be taken at Central Monitoring station.	
	Technical Specification	
7.	Tunnel size	Minimum 650 mm (W) x 500 mm (H)
8.	Resolution	36 AWG (std); 40 AWG (typ)
9.	Penetration thickness	35 mm (Std) (±50mm)
10.	Conveyor speed	3 speed settings of 0.2 m/s, 0.3 m/s & 0.4 m/s. There should be a possibility to change the speed of the conveyor belt directly from the operator keyboard without opening the machine panel during peak hours.
11.	Conveyor capacity	160 kg distributed load
12.	Power Supply	220V ±10%, 50Hz
13.	Rated Tube Voltage of X-Ray Generator	160 kV
14.	Rated Tube Current	1.2 mA
15.	X-ray generator cooling	Oil bath
16.	Duty Cycle	100%
	Image processing - The system shall consist of:	

17.	Digital Video Memory	Minimum 32 MB
18.	Grey levels	Around 4096 stored
19.	Video Display	1024 X 1280, 21.5" colour Monitor
20.	Variable Zoom	Minimum 64X continuous zoom. Additional feature of Spot magnification to view zoomed image of a particular spot.
	Computer Specification (minimum)	
21.	Monitor	21.5-inch LED monitor
22.	Operating System	Embedded Linux
23.	Processor	ARM Cortex processor
24.	RAM	Minimum 4 GB
25.	Hard Disk	2 TB
26.	Ports	USB, Ethernet and HDMI
27.	Machine Keypad	OEM specific machine keypad with fingerprint sensor for User authentication & Emergency Switch. The machine keypad should have all the image processing functions.
28.	The system shall also have multi energy system with four colour palette for material discrimination high, low, medium penetration.	
	Image Processing functions:	
29.	Edge enhancement and Image enhancement	
30.	Invert image	
31.	Black & White image	
32.	Pseudo colour – 4 colour palette for organic and inorganic stripping	
33.	Spot magnification with 2X, 3X & 4X magnification window	
34.	Automatic Image Archiving	
35.	Certification	AERB, CE & FDA
36.	Suspect organic enhancement (Z789). Explosive as well as their components are usually with atomic number of 7, meanwhile drugs are usually with atomic number of 9. Suspect organic Enhancement (Z789) specially highlights the material with atomic number 7/8/9 separately and show them in red colour while others are in black and white.	
37.	Inbuilt Software based training programme.	
38.	Report generation and data retrieval: Daily/weekly/monthly report generation and retrieval. All data should be stored on the system for minimum two months after it has been downloaded.	
39.	Threat Image Projection (TIP)	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.

40.	Operator Console	Should have a compact design having dimensions not more than 850 mm (L) x 700 mm (W) x 1200 mm (H). (±50mm)

Mode of Measurement:
The measurement for payment shall be in **Numbers.(**Each) The unit rate includes all floor and all level, the cost of transportation, material, installation as directed by Engineer-in-charge.

Item No.2

Supply and Installation of Boom Barrier -Up To 6 Mtr Including High Range Receiver, High Range Remote Control, A Pair Of Photocell Eyes, Push Button, Loop detector Cabinmate material- Powder coated , Boom Material- Aluminum Alloy.

Technical parameters
- Working temperature(motor): -35℃~+85℃
- Rated voltage： DC24 V
- Running speed： 1.5s-8 s 4.4 Rated current： 8. 58A 4.5 Rated power： 140W
- No- load speed： 1850 rpm 4.7
- Rated speed： 1400 rpm 4.8
- Output Power： 56.8 N. m 4.9
- Relative humidity： ≤90%
- Remote control distance： ≤100M（in the open place）
- IP Degree： IP44
- Max length of arm： 6M

Mode of Measurements and Payment:

The rate shall be for a unit of **each number.** The unit rate includes all floor and all level, the cost of transportation, material, installation as directed by Engineer-in-charge.

Item No.3

Supply and Installation of Hand-Held Metal Detector Scorpion™700139 US STYLE—Classic LOOKS

The HHMD should have one switch operation and should be able to detect all types of metal. It should be designed that it makes scanning easy and cover maximum portion of body of the person.

Should have sharp audible alarm and red LED light for indicating the detection of metal, Also should have selectable switch to change from audio alarm to vibration selection.

TH HHMD should have adjustable detection sensitivity for different requirement.

Dimension of HHMD should be at least 411 mm x45 mm x 85 mm.

Should be made of rugged, high impact ABS case with reinforced coil compartment.

Should be drop proof from 1 meter height at least for 3- 4 times.

High detection speed with big probe area.

Should be capable of scanning large 10" scan surface for quick through scanning.

Should have LED indication ON: low battery: and alarm for metal.

Mode of Measurements and Payment:
The rate shall be for a unit of **each number.** The unit rate includes all floor and all level, the cost of transportation, material, installation as directed by Engineer-in-charge.

Item No.4

Supply, Installation, Testing and Commissioning of Handheld Metal Detector with battery as per technical specification etc. as required.

Product Introduction
High Sensitivity Hand Held Metal Detector is suitable for personnel security checks of airports, railway, customs, schools, stadiums. Searchable endangering the personal safety of all kinds of hidden weapons, knives and hidden metal objects, it also can be used for inspection of hand baggage, mail and parcels.

General Specification
• Dimension: 295*68*28mm Net Weight: 170g (no battery), Operation Voltage: DC7~12V Detection Range
• Staple 30-50mm
• Tiananmen-style pistol…… 200mm
• 38 Caliber Pistol… 250mm

Standard Features
• Streamlined appearance, small and exquisite, easy to carry and operate, convenient, easy charging.
• Should have Low power consumption, 270MA battery charge one-time can work continuously more than 40 hours, when 9V down to about 7V, the detection range keep same.

• Should have featured with power is insufficient, there is an automatic and continuous alarm to remind you charge or replace the battery.
• Should be Light weight, large area detection sensor to detect quickly.
• Should have There are high and low sensitivity options.
• Should have Two alarm modes are available: LED lights and audible alarm or vibrating alarm.
• Should support superior shock resistance, durable, can fall from one-meter height without damage.
• Should have LED signal strength indicator

Mode of Measurements and Payment:
The rate shall be for a unit of **each number.** The unit rate includes all floor and all level, the cost of transportation, material, installation as directed by Engineer-in-charge.

Item No.5

TECHNICAL SPECIFICATION FOR MULTI-ZONE DOOR FRAME METAL DETECTOR		
S. No.	**Features**	**Description**
1		Pulse Induction Technology
2	Detection	It should be capable to detect both ferrous and non-ferrous metals .
3	Passage Dimension (±50mm)	2200 mm (H)
		800 mm(W)
		580mm (D)
4	Metal Alarm Indication	Should be able to show the metal location precisely on both entry and panel. There should be real time metal strength indication on the screen.
		Audible: Audio alarm with different tone and volume settings required
5	Zones	It should be able to switch between the number of zones i.e. 1/ 6/ 12 and 18 on the same DFMD depending on the requirement.
6	Sensitivity	Wide range of sensitivity settings and fine tuning. All zones individually adjustable in step to 0 – 999 levels.
7	Frequency	Different frequency settings should be available so as to reduce interference between adjacent DFMDs

8	Traffic Counter	Intelligent traffic counter in alphanumeric display on the overhead control unit. allow bidirectional Transceivers/Photocells in the archway. The counter should track the number of people that have passed through the detection area. The display should separately show the number of people entered through DFMD, number of people exited through the DFMD, and the number of people stayed in the premises.
9	Detection capability	(i) Uniform detection over the entire walk through area from top to bottom.
		(ii) Should be capable to detect both ferrous and non-ferrous metals.
		(iii) Should be able to detect multiple metal objects of various sizes in different zones simultaneously.
10	Display	Built-in 7" LCD pane display
11	Panel Control	DFMD settings must be controlled by Remote Contro
12	Networking facility (Optional)	
13	Relay output	The DFMD should have minimum 2 relay outputs so that it can be integrated with turnstiles/ barriers, if required.
14		The DFMD should have a mode to detect the zone wise interferences in the surroundings.
15		A minimum of 50 people per minute
16	Health and Safety	Magnetic field should be harmless to magnetic media, electronic devices, wearers of Pacemaker (heart) and pregnant women
17	Password protection	
18	Power Supply	220 VAC, 50 Hz
19	Operating Temperature	From -20°C to 55°C
20	Humidity	Up to 95% Non- Condensing
21	Weight	< 75 kg

Mode of Measurements and Payment:

The rate shall be for a unit of **each number.** The unit rate includes all floor and all level, the cost of transportation, material, installation as directed by Engineer-in-charge.