AMENDMENT-04

TENDER REF: HLL/PCD/PMSSY-II/NAGPUR/07/15-16

CSSD

1: Horizontal rectangular high pressure steam, double door sterilizer with chamber 600x900x1500 Horizontal Sterilizer 800 litre or more with Accessories

1. Existing specifications

Para 1: Horizontal rectangular high pressure steam, double door sterilizer with chamber 600x900x1500 Horizontal Sterilizer 800 litre or more with Accessories

Read as:

Para 1: Horizontal rectangular high pressure steam, double door horizontal sterilizer with chamber volume of 800 litre or more with accessories. **Should have processing capacity of 12 STU or more**

2. Existing Specifications

Para 1. E: Control System: Point 1:

The control system should be microprocessor based PLC system specially designed for sterilization application. **Control system should have touch sensitive, 7-9 inches colour display interface** at operator loading side while it should have normal interface at unloading side. Apart from main PLC based control system the sterilizer should also have additional independent monitoring & documentation system which constantly cross checks the safety systems & time.

Read as:

The control system should be microprocessor based PLC system specially designed for sterilization application. **Control system should have touch sensitive, 5-9 inches colour display interface** at operator loading side while it should have normal interface at unloading side. Apart from main PLC based control system the sterilizer should also have additional independent monitoring & documentation system which constantly cross checks the safety systems & time.

3. Existing Specifications

Para 1.K: Vacuum Pump:

High vacuum compressor (water ring type) with recycling facility for removal of air within the chamber should be provided & mounted on vibration isolator for quite operations. . It should also have low water level alarm to protect it from dry run.

Read as:

High vacuum pump (water ring type) with recycling facility for removal of air within the chamber should be provided & mounted on vibration isolator for quite operations. . It should also have low water level alarm to protect it from dry run.

4. Existing Specifications

Para 1. R: High vacuum compressor with recycling facility.

Read as:

Para 1. R: DELETED

2: Horizontal Steam Sterilizer autoclave (Sterilizer 500 L with Accessories)

1. Existing specifications

Para 2: Fully automatic PLC or Microprocessor controlled Horizontal Rectangular Autoclave (Steam Sterilizer), floor mounted with pre and post-vacuum treatment and with loading equipment.

Read as:

Para 2: Fully automatic PLC or Microprocessor controlled Horizontal Rectangular Autoclave (Steam Sterilizer) **double door**, floor mounted with pre and post-vacuum treatment and with loading equipment **with at least 8 STU or more capacity**

2. Existing specifications

Para 2 (a) Door: The sterilizer supplied should be supplied with **automatic sliding door** with door safety features. Door Safety Systems

Read as:

Para 2 (a) Door: The sterilizer supplied should be supplied with **automatic vertical sliding door** with door safety features. Door Safety Systems

3. Existing specifications

Para 2. E.1 (control system): The control system should be microprocessor based PLC system specially designed for sterilization application. **Control system should have touch sensitive**, **7-9 inches colour display interface** at operator loading side while it should have normal interface at unloading side. Apart from main PLC based control system the sterilizer should also have additional independent monitoring & documentation system which constantly cross checks the safety systems & time.

Read as:

Para 2. E.1 (control system): The control system should be microprocessor based PLC system specially designed for sterilization application. **Control system should have touch sensitive, 5-9 inches colour display interface** at operator loading side while it should have normal interface at unloading side. Apart from main PLC based control system the sterilizer should also have additional independent monitoring & documentation system which constantly cross checks the safety systems & time**.**

4. Existing specifications

Para 2.K: Vacuum Pump: High vacuum compressor (water ring type) with recycling facility for removal of air within the chamber should be provided & mounted on vibration isolator for quite operations. . It should also have low water level alarm to protect it from dry run.

Read as:

Para 2.K: Vacuum Pump: High vacuum pump (water ring type) with recycling facility for removal of air within the chamber should be provided & mounted on vibration isolator for quite operations. . It should also have low water level alarm to protect it from dry run.

5. Existing specifications

Para 2.p: High vacuum compressor with recycling facility.

Read as:

Para 2.p: DELETED

3: Hot Air Oven (Drying Cabinet)

1. Existing Title of equipment: Hot Air Oven (Drying Cabinet)

Read as: Drying Cabinet

2. Existing specifications

Para 1: Should be automatic in operation

Read as:

Para 1: Should be automatic **microprocessor or PLC based** operation

3. Existing specifications

Para 2: Inner chamber should be made up of stainless steel and outer chamber should be of epoxy painted CRCA sheets

Read as:

Para 2: Inner chamber should be made up of SS304 and outer chamber should be of epoxy painted CRCA sheets

4. Existing specifications

Para 5: Approximate Dimension: **600X600X 600 mm**

Read as:

Para 5: Should have minimum **capacity of 240 litres or more**

5. Added Para 1: Drying cabinet should be single door type

6. Added Para 2: Offered model should be European CE or USFDA approved

Added Para: Technical Specifications of - 4: RO Plant

1. Reverse Osmosis Plant 1500 Litres per hour capacity

2. Should have stainless steel skid mounts for pre-treatments and RO unit

3. Should have booster Pumps.

4. Should have direct bypass valve and auto flush systems.

5. Should have thin film composite membrane of equivalent.

6. Should have dry run protection of pump.

7. Should have auto flush timer.

8. Should have automatic tank level control.

9. Should have over voltage and over current protection.

10. Should have high efficiency reverse osmosis membrane.

11. Should have water reservoir with bacterial vent filter to ensure microbiological integrity (storage capacity as per BOQ).

12. Should have re-circulation pump provides instantaneous delivery flow.

13. Should have comprehensive micro-processor monitoring and control system.

14. Should be BIS/ CE certified. Certificate should be provided.

Turnkey for CSSD

1. Existing specifications

Para ll: Air Conditioning: Point 1: Should provide **split a/c or ductable package** with wireless remote control for, sterile stores, packing area, clean store and office room. Ducting and false ceiling as necessaryRead as:

Para ll: Air Conditioning: Point 1: Should provide **ductable air conditioning package** with wireless remote control for, sterile stores, packing area, clean store and office room. Ducting and false ceiling as necessary

2. Existing specifications

Para – Preferred make – Sl.No.B: Plumbing: Kohler, Jaguar (page 57)

Read as:

Para – Preferred make – Sl.No.B: Plumbing: SS 316 pipes of reputed make. Certificates for SS 316 pipe to be provided at the time of installation.

3. Added Para 1: **Total area for Turnkey** – for Super Specialty Hospital, the bidder has to plan the CSSD in an area of approx. 3000 S.ft. Hospital shall provide electrical supply, water supply and drain facility up to CSSD Area. **All electrical works, plumbing and drain inside CSSD is the responsibility of the bidder. Construction of new walls, windows, plaster, paints, doors, floor tiles, wall tiles etc.; dismantling of existing walls, windows, tiles, doors etc. (if required) according to the approved drawings will be responsibility of the bidder.**

False ceiling: Should be of aluminum composite panels

Provision of electrical control panels with all required switchgears etc. of reputed make: Siemens/LT/Legrand/Havells etc. is also under the scope of the bidder

Bidders should visit site for planning turnkey works and submit working drawings.

*****Bidders shall be responsible for approval of drawings by MAH. State PWD, Nagpur and GMC, Nagpur/HLL before start of the CSSD job.**

3. Added Para 2: **Total area for Turnkey** – for GMC, Nagpur, the bidder has to plan the CSSD in an area of approx. 4700S.ft. Hospital shall provide electrical supply, water supply and drain facility upto CSSD Area. **All electrical works, plumbing and drain inside CSSD is the responsibility of the bidder. Construction of new walls, windows, plaster, paints, doors, floor tiles, wall tiles etc.; dismantling of existing walls, windows, tiles, doors etc. (if required) according to the approved drawings will be responsibility of the bidder.**

False ceiling: Should be of aluminum composite panels

Provision of electrical control panels with all required switchgears etc. of reputed make: Siemens/LT/Legrand/Havells etc. is also under the scope of the bidder

Bidders should visit site for planning turnkey works and submit working drawings.

*****Bidders shall be responsible for approval of drawings by MAH. State PWD, Nagpur and GMC, Nagpur/HLL before start of the CSSD job.**

******Note – All participating bidders are strictly advised to have visit before submitting their offer**

Existing BOQ for GMC, Nagpur CSSD is changed as follows

Existing BOQ

BOQ FOR NAGPUR CSSD - GMC

Sl. NO	Name of the item	QUANTITY
1	Horizontal rectangular high pressure steam, double door sterilizer with chamber 600x900x1500 Horizontal Sterilizer 800 litre or more with Accessories	3
2	Horizontal Steam Sterilizer autoclave (Sterilizer 500 L with Accessories)	4
3	Hot air oven (Drying Cabinet)	3
4	RO PLANT1500 litre with tank capacity of 6000 litre	1
5	Turnkey works including air-conditioning, dismantling, civil, electrical, plumbing, mechanical, firefighting as per specifications	1

Read the new BOQ as follows

Sl.No.	Name of the item	Qty
1	Horizontal rectangular high pressure steam, double door sterilizer 12STU or more with Accessories	**3**
2	Horizontal Steam Sterilizer autoclave (8STU or more with Accessories)	**4**
3	Drying Cabinet	**3**
4	RO PLANT 1500 litre/hr with storage tank capacity of 10,000 litre	**1**
5	Ultrasonic Cleaner (40L)	**1**
6	Washer disinfector with accessories	**1**

7	Heat Sealing Machine	**1**
8	Spray Gun Rinser	**1**
9	Table top sterilizer with accessories (flash autoclave)	**1**
10	Furniture items (list enclosed)	**1**
11	Turnkey works (As per specification)	**1**

Bidder should quote unit price and total price of each of the above item

Existing BOQ for Super Specialty, Nagpur CSSD is changed as follows

Existing BOQ

BOQ FOR NAGPUR CSSD - SSH

Sl. NO	Name of the item	QUANTITY
1	Horizontal rectangular high pressure steam, double door sterilizer with chamber 600x900x1500 Horizontal Sterilizer 800 litre or more with Accessories	1
2	Horizontal Steam Sterilizer autoclave (Sterilizer 500 L with Accessories)	2
3	Hot air oven (Drying Cabinet)	1
4	RO PLANT1500 litre with tank capacity of 6000 litre	1
5	Turnkey works including air-conditioning, dismantling, civil, electrical, plumbing, mechanical, firefighting as per specifications	1

Read the new BOQ as follows

Sl.No.	Name of the item	Qty
1	Horizontal rectangular high pressure steam, double door sterilizer 12STU or more with Accessories	**1**
2	Horizontal Steam Sterilizer autoclave (8STU or more with Accessories)	**2**
3	Drying Cabinet	**1**
4	RO PLANT 1500 litre with tank capacity of 6000 litre	**1**
5	Ultrasonic Cleaner (40L)	**1**
6	Washer disinfector with accessories	**1**
7	Heat Sealing Machine	**1**

8	Spray Gun Rinser	**1**
9	Table top sterilizer with accessories (flash autoclave)	**1**
10	Furniture items (As per list enclosed)	**1**
10	Turnkey works (As per specification)	**1**

Bidder should quote unit price and total price of each of the above item

The specifications of items added in the BOQ of GMC & SSH, Nagpur, i.e. Ultrasonic Cleaner (40L), Washer disinfector with accessories, Heat Sealing Machine, Spray Gun Rinser, Table top sterilizer with accessories (flash autoclave) and list of furniture is as follows

Ultrasonic Cleaner (40 L)

1. The units should be a compact free-standing bench model, with a built-in tank manufactured from high-quality (316) stainless steel and a solid-state generator that sends ultrasonic (approx 40 KHz) impulses through wash water containing detergent and electrical heating; microprocessor controlled display with memory time and temperature functions.

2. The electrical energy should be transformed into sound waves by transducers, fixed to the bottom of the tank.

3. The tank should be made of solid stainless steel (316).

4. The ultrasonic cleaner should have a display and control which could be easily seen and placed above any liquid for safety and reliability.

5. It should have digital read out timer and temperature setting (temperature adjustable from 30 to 69 °C or more) monitoring.

6. Capacity should be 40 L

7. Should work on 230V, 50 Hz AC Supply.

8. Ultrasonic cleaner should be European CE /US FDA certified.

9. Ultrasonic cleaner should supplied with Wire mesh basket of suitable size & Stainless steel lid

10. Manual Trolley Washer

1. Trolley washer should be wall mounted spray gun unit with holder for detergent.

2. Should have connection to hot water with ½" tubing or reinforced rubber hose.

3. Should work on normal water pressure

4. Cleaning agent should be automatically injected into the water flow

Washer disinfector with accessories

1. The washer disinfector shall be suitable for cleaning and disinfection of surgical instruments/goods. The process shall include pre wash, detergent wash and hot water disinfection, rinse and drying cycles.

2. The unit shall be suitable for electrical operation and would be complete with water circulation pump, necessary valves & fittings.

3. It should be microprocessor based so as to ensure correct program sequence and irregularities or deviations which are displayed immediately.

4. Chamber Capacity: Chamber capacity: Operational Volume should be 300 to 350 L. Should supply 12 Nos of standard Stainless Steel DIN trays. The chamber should be made of S.S. 304 or S.S. 316L quality with electro polished washed surfaces. The chamber edges should not have the pockets & folds so as to avoid bacterial growth. The wash chamber should also be fitted with bright light for clear visibility of the washing process. Chamber dimension should suit the capacity

5. Washer should have following features:

a) For shortest possible filling and draining phases, higher capacity quick opening valves should be used so that short total process time is achieved. The design should focus on saving the environment through reduced consumptions of all utilities.

b) Cleansable spray arms should be located at the top and bottom of the chamber.

c) Wash carts should be equipped with cleansable spray arms between each shelf so as to facilitate water to reach all the surfaces which needs to be cleaned.

d) Injection wash carts should be automatically connected to water and drying air in order to clean and dry the inside of the tubular instrument.

e) The drying air should be pre-heated.

f) The washer should be equipped with independent temperature monitoring and validation test port.

g) Data interface RS232 should be available.

h) All electrical components should be easily accessible for easy service - ergonomic design.

i) Deleted

j) Washer should be equipped with audible alarm that alerts if error code occurs.

k) Double door should be made of toughened glass for see through & should facilitate the loading process.

l) The washer should have 3 dosing pump (detergent, alkaline & lubrication) for process chemicals, instrument lubricants/ enzymatic cleaners

6. The washer should perform:

a) Pre-rinses with cold water.

b) Main washes with hot water (60C) and detergent.

c) Final rinse with water (55C)

d) Disinfection with hot water (85C)

7. Unit to have LCD display and operating console to have membrane key pad for durability or LCD touch screen display

8. Unit should feature safety measures such as:

a) Automatic door lock.

b) Automatic temperature regulation.

c) Electronic adjustment of water level.

9. The unit should also have an interface as standard for an optional batch printer.

"10. The washer disinfector shall be supplied with universal rack, 4 level racks for instrument tray, full size instrument tray as well as stop valves, anti-suction device and plastic water trap.

"

11. Should ensure essential washing accessories.

12. Standards & Norms:

Should be US FDA/European CE certified.

Manufacturer should be ISO 13485:2003/ EN ISO15883/ISO9001

Heat Sealing Machine

1. Rotary heat sealers should provide validated sealing of sterilization bags and clear-view pouches (paper/plastic laminate).

2. It should be microprocessor-controlled.

3. The rotary heat sealer should give documentation of process parameters via an integrated printer and could be integrated with documentation system.

4. The ergonomically design should be tilted forward for increased user convenience and space saving installation.

5. The sealer housing should be powder-coated and the control panel is of the flat-membrane type, for easy cleaning.

6. It should be operationally simple. When a bag is fed into one side of the machine, the machine should start automatically or by pushing a button, moving the bag through the machine, and applying pressure and heat to form a perfect seal.

7. The warm-up time should not exceed 30 seconds, and the feed speed should be approx. 10 m/min.

8. The temperature should be adjustable from 50–200°C with a tolerance of 1% of the set value.

9. It should be regulated by a heating element that is highly sensitive to temperature fluctuations, assuring even temperature and perfect seals.

10. It should offer a number of additional features, including:

a) Automatic start-up

b) Reverse feed function in case an instrument accidentally enters the sealing area

c) Energy-saving stand-by mode

d) Pre-set temperatures

e) Re-settable counter function

11. Rotary heat sealers come with a port and cable for connection of the sealer to a PC and printer, enabling monitoring and documentation of the entire process.

12. Should have a protection mechanism against overheating and start prevention at temperature deviations outside +/- 5° C tolerance.

13. Rotary heat sealer should be European CE /US FDA certified.

Spray Gun Rinser

1. Spray gun rinse unit should be designed for connection to water or compressed air, to use for assisted cleaning of pipettes, catheters, cannulas, syringes etc.

2. The spray-gun should include tubing and different tips and nozzles for the various cleaning purposes, like

a) Syringes and cannulas with Record cone

b) Measuring and blood pipettes

c) Catheters and small pipes

d) Drainage tubing

e) Syringes and cannulas with Lure cone

f) Spray jet for rapid instrument cleaning

g) Bottles and Erlenmeyer flasks

h) Water jet pumps for suction cleaning

i) All appliances are stored within easy reach on a special wall-mounted rack (included).

3. A special wall-mounted rack should be a part of standard supply to store all appliances within easy reach.

4. All tips should be able to get easily locked to the spray gun by a safety cone.

5. The gun grip is heat-insulated. The water/air pressure is released, regulated and fully controlled by the spray-gun trigger (adapted to a 1/2" connection).

6. Bidder should provide complete details of sets of standard and optional adapters, nozzles and accessories.

Table Top Sterilizer with Accessories (Flash Autoclave)

1. Sterilizer Type: Table Top Sterilizer

2. Capacity: 20-25 L

3. Chamber Size: The sterilizer should have Circular or Rectangular chamber .

4. Quality System Compliance: Sterilizer should comply the quality systems as per ISO 9001:2000/ EN ISO 13485:2003/ ISO 14001:2004.

5. Quality Standards: Sterilizer should be US FDA/European CE certified

6. Types of Cycles Process: Table Top Sterilizers should be equipped with B-process, N process as per latest EN 13060 .Proof of declaration of conformity.

7. Chamber:

- Should be made of S.S.316 & should comply the Pressure Equipment Directive (PED) &EN 13445 norms.
- Chamber should have working pressure 2.2 bar& design pressure up to 3.8 bar.
- Chamber should be equipped with electrically heated jacket for preheating on standby mode.

8. Door Design: Should have radially opening door with at least one or two locking bolts for enhanced door safety. The doors should come with silicon elastomeric rubber gasket to withstand temperature up to 140°C & 20-30 psi.

9. Air Filter: A disposable air filter should be provided for filtering the atmospheric air before entering inside the chamber. The filter separation efficiency should be higher than 99.998% for particle size less than 0.3µm.

10. Cycle programs:

● 134°C Wrapped.

● 121°C Wrapped.

● 134°C Flash/Rapid open instrument cycle.

● 134°C Textile.

● Test programs : Bowie & Dick, Leak Test.

11. Water Storage Tank: Sterilizer should have inbuilt water reservoir with storage capacity up to 5 L. The water reservoirs should have easy access for cleaning & to avoid bio film.

12. Steam Generator: Sterilizer should have inbuilt steam generator .The steam generator design should be with integrated energy storing system for building up power for sterilization loads in short time.

13. Control Panel: The control system should be microprocessor based PLC system specially designed for sterilization applications. The control system should have CPU processor with battery back-up, Digital input/output controls, analog measuring inputs & COM ports for printer & PC connectivity.

14. Alarms: Automatic process checking & failure correction should be possible by the control system. The range of alarm should include Temperature & pressure sensor failure, phase time-out, doors not properly closed, power failure (less than 10 sec should be ignored), continuous self-checking of all the safety devices, low water level etc. All the alarms should be audio-visual.

15. Accessories: The sterilizer unit should include rack with 3 or more levels & suitable size instrument trays should be the part of the supply for every sterilizer. The Sterilizer should have water circulation system so that no drain point & fixed water inlets required

16. Electrical Requirement: 230V & 50 Hz electric supply.

Bidder should quote for the following furniture items both for GMC & Super Speciality, Nagpur

Sl. NO	ITEM AND AREA	QUANTITY for GMC, Nagpur	QUANTITY for SSH, Nagpur	Total Qty
A	**SOILED RECEPTION**			
1	Issue/ Receive Counter	1	1	
2	Staff Chair	1	1	
3	Lab Stool	3	3	
4	Waste Bin Pedal Operated- SS	1	1	

5	Storage Cup board	2	2	
6	Computer	1	1	
B	**TROLLEY HOLD & WASH**			
1	Manual Trolley Wash	1	1	
C	**WASH AND DISINFECTION AREA**			
1	Wire Storage Shelf Module for Dirty/ Disinfection Area	2	2	
2	Inspection Lamp	5	5	
3	Wash Stations with 2 sinks for Dirty Area	3	3	
4	Vacuum Cleaner	1	1	
5	Hand Dryer	1	1	
6	Work Table for wet goods for Dirty area	3	3	
7	Lab Stool	8	8	
8	Waste Bin Pedal Operated- SS	2	2	
9	Table Trolley for Dirty/ Clean/ Sterile area	1	1	
D	**CLEAN STORE**			
1	Wire Storage Shelf Module for Clean supply Area	5	5	
E	**OFFICE**			
1	Office Table	1	1	
2	Staff Chair	1	1	
3	Visitor's Chair	2	2	
4	Storage Cup board	1	1	
5	Waste Bin Pedal Operated- SS	1	1	
6	Computer	1	1	
F	**STAFF CHANGE ROOM FEMALE**			
1	Change Locker	1	1	
2	Waste Bin Pedal Operated- SS	1	1	
3	Shoe Rack	1	1	
G	**STAFF CHANGE ROOM MALE**			
1	Change Locker	1	1	
2	Waste Bin Pedal Operated- SS	1	1	
3	Shoe Rack	1	1	
H	**STAFF REST ROOM**			
1	Office Table	1	1	
2	Visitor's Chair	4	4	
3	Storage Cup board	1	1	
4	Waste Bin Pedal Operated- SS	1	1	
I	**CONTROL & PACKING AREA**			
1	Control & Packing Table with 2 Shelves for clean Area	6	6	
2	Lab Stool	28	28	
3	Wire Storage Shelf Module for Clean supply Area	6	6	
4	Waste Bin Pedal Operated- SS	2	2	
5	Inspection Lamp	5	5	
6	Documentation Labelle	1	1	

7	Instrument Tray Small	100	100	
8	Instrument Tray Big	75	75	
9	Table Trolley for Dirty/ Clean/ Sterile area	2	2	
10	Paper Dispensing Trolley	3	3	
11	Work Table for Dry Goods for Clean Area	1	1	
J	**LINEN INSPECTION, FOLDING & PACKING**			
1	Linen Fold Table for Clean Area	2	2	
2	Lab Stool	4	4	
3	Open Storage Rack	2	2	
4	Waste Bin Pedal Operated- SS	1	1	
5	Linen Distribution and Storage Trolley	5	5	
K	**GAUZE CUTTING ROOM**			
1	Gauze Cutting Machine	2	2	
2	Work Table for Dry Goods for Clean Area	1	1	
3	Lab Stool	2	2	
L	**ETO ROOM**			
M	**STERILE STORE**			
1	Wire Storage Shelf Module for Sterile Store	17	17	
2	Waste Bin Pedal Operated- SS	2	2	
3	Lab Stool	4	4	
4	Closed Transport Trolley From Sterile Store to OT	10	10	
5	Modular Sterilizing Basket- Big	200	200	
6	Modular Sterilizing Basket- Medium	100	100	
7	Closed Sterilization Containers 300mmX290mmX110mm	3	3	
8	Closed Sterilization Containers 300mmX290mmX140mm	3	3	
9	Closed Sterilization Containers 300mmX290mmX2600mm	3	3	
10	Free Standing Basket rack	12	12	
11	Basket Trolley	1	1	
12	Table Trolley for Dirty/ Clean/ Sterile area	1	1	
13	Work Table for Dry Goods for Sterile Area	2	2	
N	**ISSUE COUNTER**			
1	Issue/ Receive Counter	1	1	
2	Staff Chair	1	1	
3	Waste Bin Pedal Operated- SS	1	1	
4	Pass Box	1	1	
5	Computer	1	1	

Bidder should quote unit price and total price of each of the above item

TECHNICAL SPECIFICATIONS FOR FURNITURE item:

1. **Issue/ Receive Counter**

- Construction: Counter Top should be made of granite top
- Should be aesthetically good
- Should provision for placing CPU,UPS, Mouse, Keyboard etc

2. Staff Chair

- Medium Back chair
- Revolving
- Seamlessly upholstered seat and backrest, antimicrobial with poly foam cushion.
- Colour of upholstery – blue / grey
- Colour of base – black
- With height adjustable, broad, padded and upholstered arm rests and comfortable back rest

3. Lab Stool (SS)

- Stainless Steel top
- Height adjustable from 450mm to 680 mm, through mild steel threaded screws
- Four legged base made of 25mm steel tube mounted on rubber shoes.
- Stainless steel ring for footrest
- Pre-treated Epoxy powder coated frame work

4. Waste Bin Pedal Operated- SS

- Should be made up of high quality stainless steel
- Should have minimum capacity of 5 litres
- The covering lid should be open able by pressing the plate/Pedal attached to the bottom

5. Storage Cupboard

- Should have size 500mmL x 450mmH x 400 mm depth.
- Material should be high quality, cold rolled, close annealed (CRCA) steel.
- Should be provided with lockable doors

6. Computer

- Intel core i3 or later (the latest available in the market)
- 19" Flat LCD Monitor
- Licensed Operating System-Windows 7 or later

- 4 GB RAM, DVD-ROM Drive.
- Built in LAN
- 500 GB of hard drive capacity
- USB Port- 3

7. Manual Trolley Wash

- Trolley washer should be wall mounted spray gun unit with holder for detergent.
- Should have connection to hot water with ½" tubing or reinforced rubber hose.
- Should work on normal water pressure
- Cleaning agent should be automatically injected into the water flow.

8. Wire Storage shelf module

- Size (LxWxH) : 1525x1895x455 mm
- Construction should be based on single free-standing shelf modules for storage of clean linen, instruments, and packing material or sterilized goods, including disposables.
- The compact modules should have shelf lengths of 610, 910, 1220, 1525 or 1830 mm. and the modules should be extremely space-efficient. Moreover, two single modules can be placed back to back and combined as a double module unit.
- If two sets of shelves are to be connected, 10 S-hooks are needed.
- The wire construction should allow good air circulation while permitting easy inspection of the goods.
- The wire shelves should be made of special heavy-duty steel (304), chromium-plated and surface treated with clear epoxy varnish to facilitate cleaning.
- The modules should be easy to assemble on site and all parts fit precisely.
- Shelves should be mounted by means of plastic clamps onto circular rigid posts, with the adjustable height within a range of about 50 mm. Each post should include a height adjustable foot.
- Each module should include 5 shelves, mounted at heights of about 450, 800, 1150, 1500 and 1850 mm above floor level.
- The shelf unit could also be used as a mobile storage unit by replacing the foot with optional Ø 125 mm castors.

9. Inspection Lamp

- Should have two spring balanced arms with parallel movement of at least 150 degree in horizontal plane
- Magnifying lens should be of fixed 7 diopter bi-convex

- Lens diameter should be approximately 12.5 cm

10. Wash Stations with 2 sink for Dirty Area

- Size (LxWxH) : 2000x750x850 mm
- The worktop should be made of solid, bright-polished minimum sheet thickness of 1.5 mm stainless steel (304) to withstand heavy-duty work with wet instrument.
- Designed with an integrated 10 mm high edge at the front and sides, and a 60 mm high edge (splash back) at the rear
- The front and side edges are reinforced and widened to 49 mm. Edges are welded together and polished at the corners.
- The worktop should slope to the sink, and reinforced by a full-length support frame.
- The support frame should be a complete assembly with the front, back and ends welded together at the corners.
- The worktop and support frame should be bonded together with double-adhesive tape of a special, age-resistant quality to give rigidity and noise abatement.
- The floor stand should be made of polished stainless steel.
- The table should be available with double sink units, all with a smooth, polished inside finish for stainless steel (304) top with dimensions (size) of (L x W x H), 2400 x 750 x 850 mm.
- Corners should be curved to a 65 mm radius for easy cleaning.
- The bottom should slope to the drain.
- All standard sink units are of sizes that also allow processing of the large modular instrument trays (L450 x W340 x H70 mm).
- Sink units are 650 mm wide and 900 mm high (adjustable ± 25 mm).
- The legs should be able to provide strong support and hold to the entire unit securely.
- The sink should include a drain valve, removable strainer, manually operated drain-valve, overflow drainpipe and water trap. The table also includes a mixing faucet with swivel spout, for cold and hot water connection.

11. Vacuum Cleaner

- Upright vacuum cleaner
- Vacuum and blowing functions
- 30 litre tank rust-resistant
- 60 litres per second air flow, 17 kilopascals suction power
- Should work on 230V, 50 Hz

12. Hand Dryer

- Should be wall mount type
- Should have infrared sensor for automatic detection of hands
- Should have brushed 304 SS finish
- Motor should be at least 1/10 HP at 7500 RPM
- Dryer should deliver the flow of 7300 LFM
- Should work on 230V, 50 Hz power supply
- Should supply with all accessories such as clamps for mounting

13. Work table

- Size (LxWxH) : 1600x750x900 mm
- Stainless steel tables specially designed for work with dry and wet goods (heavy-duty sorting of wire baskets and containers and work with dry/wet goods, inspection, and packing various sets of surgical instruments in trays) and for general purpose pre-storage.
- The work tables should have a rigid stainless steel construction which is easy to clean and without sharp edges or corners.
- The table should be ergonomically worked up, should have easy to clean robust matt-finished (to reduce reflection of light from the surface) with minimum sheet thickness of 1.5 mm stainless steel (304) worktop/surface to withstand and carry out heavy work comfortably, either sitting or standing.
- The edges along the front, back and sides should be reinforced and widened to 37 mm, giving a rigid construction.
- They are welded together and polished at all corners for good hygiene, as well as for the comfort and safety of the staff.
- The worktop should be supported by a complete assembly with full-length reinforcements along the front, back and ends, welded together at the corners.
- The worktop and support frame are bonded together with double-adhesive tape of a special, age-resistant quality to give rigidity and noise abatement.
- The support frame has to be mounted on a solid, stable floor stand, made of polished stainless steel square tubing, with horizontal braces 300 mm above floor level. An adjustable (± 25 mm) plastic foot, easy to clean, is mounted on each leg.
- The provision is to be made for a sturdy 445 mm-wide stainless steel shelf (optional) can be mounted on the horizontal braces.
- Delivered ready for assembly.
- All edges should be smooth and the rigid frame should be made up of minimum 1.5 mm sheet thickness stainless steel (304).

- There should be unobstructed access to the working space, since the only supports needed along the front of the table are the corner legs. This also facilitates cleaning of floors.

14. Table Trolley for Dirty/ Clean/ Sterile Area

- Size : 1080x550x800 mm
- The table trolley is made of all-welded medical grade stainless steel tubing.
- The trolley should have handlebars.
- The solid top and bottom shelves are made of heavy gauge stainless steel (304) with a ground and polished finish, and with a 12 mm raised edge all around.
- The lower shelf is 300 mm above floor level. There are protective buffer rollers on all four corners.
- The table trolley has 4 swivel wheels, mounted in ball bearings, for easy handling even in narrow passages.

15. Office Table:

- High quality, aesthetic and ergonomic design
- Top made up pre-laminated, ivory coloured material of high density pressed wood, properly treated.
- Flame and water retardant. Lipped on all sides
- Frame colour: ivory/grey
- Should have an option for placing keyboard of computer
- One shelf on left side
- Size (approx):1200 mm(L)X800 mm(w)x750 mm(H)

16. Visitor's Chair

- Visitors chair ergonomically designed, sturdy and of good quality.
- Should give comfortable seating and low back support.
- Padded seats with upholstery of leather finish.
- With arm rests, fixed height.
- Resting on high quality 50mm castors on4 legs with cross reinforcement for sides with arm rest and foot stumps of PVC.
- Frame of MS tubing, multiple pre-treated and finished with epoxy powder coating.

17. Change locker

- Change locker should have 4 compartments.

- Should have 2 lockers at bottom and 2 at top.
- Should be of MS
- Should be pre-treated and epoxy powder coated.
- Change locker with 4 compartments.
- Size of each compartment: 20cm(W)x80cm(H)x45cm(D)

18. Shoe Rack

- Control Shoe rack to keep 12 pair of shoes.
- Should be made up of MS powder coated rack with 4 tiers.
- Should have length, breadth and depth to keeps shoes of all standard sizes.

19. Control & Packing Table with 2 shelves for Clean Area

- Size (LxWxH) : 2000x1400x900 mm
- This table should be specially designed for sorting, inspection, functional control and packing of various sets for wards, clinics etc. and for surgical instrument sets in trays. The work could be done comfortably, either sitting or standing.
- The worktop should be made of a robust wood-based core material, surfaced with plastic laminate in a soft beige colour that reduces reflection of light from the surface. All edges should be smooth. The extended width of the worktop should be designed to facilitate thorough inspection of instrument trays and allow the use of large wrapping material.
- The rigid frame is made of either powder-coated mild steel or stainless steel (304).
- There should be unobstructed access to the working space, since the only supports needed along the front of the table are the corner legs. This also facilitates cleaning of floors.
- The single workplace table should have 700 mm wide worktop and a double workplace should have1400 mm worktop.
- The table should include a two-shelf console, mounted on the worktop, for storage of packaging materials. The rigid supporting columns of the console include 3 electrical outlets.
- For the single model, the widths of the console shelves should be 300 mm (upper) and 350 mm (lower). For the double model, the widths should be 600 and 700 mm respectively.
- There should be a free space of 305 mm between the lower shelf and the worktop, and 110 mm between the two shelves.
- The table should have a wooden drawer unit (2 units on the double model) mounted under the worktop.
- Each drawer unit should be 400 mm wide and includes a drawer and a sliding plate.

- Optional fluorescent tube fittings (Inspection lamp) are also available.

20. Document Labelle

- The labeller should be 3–line for printing the following information
    a. Person responsible for sterilization
    b. Load number
    c. Packaging content
    d. Sterilizer number
    e. Production date
    f. Expiry date
- Should have 24 rolls of 750 3-line labels with double adhesives (Steam and ETO) indicator

21. Instrument Tray Small

- Area : Various movement
- Size : 340x250x70 mm
- It should be modular design with high precision and should be designed for use with modular wire baskets through all phases of instrument processing: washing and disinfection (both manual and in an automatic washer-disinfector), ultrasonic cleaning, inspection and packing, sterilization, storage, distribution and usage.
- It should be self-drying after disinfection in hot water (min.+85°C)
- Instrument trays should be sturdy, jig-welded trays maintain their size and shape even if handled carelessly.
- It should be stackable.
- The tray should be made of stainless steel (304) wire net, with a maximum mesh size of 6.5 mm and a wire diameter of 1.5 mm. This design gives optimal cleaning results and at the same time prevents instruments from penetrating the sides of the tray.
- All cross-points in the network and vertical wires to top and bottom frames should be point welded.
- All free wire ends should be soft-polished to prevent injury when handled.
- The bottom wire construction should include a rigid, 3 mm diameter, stainless steel (304) wire frame to provide space for airing between goods and work surface and to allow use on roller, belt and chain conveyors.
- It should be electro-polished for smooth, clean surfaces and also suitable for ISO modular wire baskets.

22. Instrument tray Big

- Area : Various movement
- Size : 450x250x70 mm
- It should be modular design with high precision and should be designed for use with modular wire baskets through all phases of instrument processing: washing and disinfection (both manual and in an automatic washer-disinfector), ultrasonic cleaning, inspection and packing, sterilization, storage, distribution and usage.
- It should be self-drying after disinfection in hot water (min.+85°C)
- Instrument trays should be sturdy, jig-welded trays maintain their size and shape even if handled carelessly.
- It should be stackable.
- The tray should be made of stainless steel (304) wire net, with a maximum mesh size of 6.5 mm and a wire diameter of 1.5 mm. This design gives optimal cleaning results and at the same time prevents instruments from penetrating the sides of the tray.
- All cross-points in the network and vertical wires to top and bottom frames should be point welded.
- All free wire ends should be soft-polished to prevent injury when handled.
- The bottom wire construction should include a rigid, 3 mm diameter, stainless steel (304) wireframe to provide space for airing between goods and work surface and to allow use on roller, belt and chain conveyors.
- It should be electro-polished for smooth, clean surfaces and also suitable for ISO modular wire baskets.

23. Paper Dispensing Trolley

- Should be movable trolley for storing four different sizes of sterilizing wrapping paper sheets should be made of stainless steel tube.
- Should have four ball bearing rubber wheels, of which two wheels should be equipped with brakes.

24. Linen fold table for clean area

- Frame should be made up of SS 304
- Top should be made up SS 304
- Approximate Dimension in mm : 1500x1200x950

25. Open storage rack

- Open racks should be made of stainless steel
- Storages with highly durable, and should have narrow holes for allowing ventilation
- Should be water resistant, disinfectant resistant and rust proof.

- Should be provided with lockable castors
- Should have warranty for three years.
- Approx. Dimensions: L x W x H : 180cm (H)x45 cm (W) x75cm(L)

26. Linen distribution and storage trolley

- Size : 1020x740x1750 mm
- Distribution trolleys should be ergonomically designed for convenient manual distribution of sterilized goods to the users or for returning used goods to the central processing area.
- The trolley should be flexible and easy to handle and transport modular wire baskets and/or closed tote boxes, to increase handling efficiency and improve safety for the end-user, transport staff and the surroundings.
- These trolleys should have horizontally mounted slide bars that act as supports for the baskets and/or tote boxes.
- A heavy-duty stainless steel (304) bottom plate should protect the goods during transport.
- A sturdy handle should be mounted on the bottom frame for convenient handling, even in narrow corridors.
- The handle is so designed to permit the use of disposable plastic or reusable cloth covers for further protection during distribution.
- The trolley should be made of heavy-duty polished stainless steel (304) and every detail is designed for easy cleaning and disinfection.
- The wheels (2 fixed, 2 swivel) have a diameter of 125 mm and are made of rubber with ball bearings.

27. Gauze Cutting Machine

- Should be useful in cutting thickest of cotton gauze material
- Should consist of a cutting unit and a knife sharpening unit
- Blade size : 200 mm
- Cutting Capacity: 165 mm
- Should work on 230V, 50 Hz power supply.

28. Closed transport trolley from Sterile store to OT

- Size : 1400x750x1260 mm(LxWxH) (External)
- A Closed Transport trolley is used for sterile goods handling, for which higher protection than normal dust protection is required, e.g. short transports between hospital buildings. Suitable for handling baskets or containers with a total capacity of 9 STU (1 STU = 600 x 300 x 300 mm) on three solid, removable shelves (3 x 3 STU).

- Trolley should be fitted with large stainless steel wheels (Ø 160 mm) for easier manoeuvrability.
- Should have two fixed and two swivel wheels with brakes.
- Should be of fully welded stainless steel construction (minimum 18 gauges, 304).
- The doors should open 270° for easy access and cleaning.
- Trolley should have lockable doors and should include handlebars.

29. Modular Sterilizing Basket- Big

- Size : 585x395x195 mm
- Area : Various movement
- It should be modular design with standard SPRI sizes and high precision and should be designed for sterilizing / processing as well as easy handling and management of the supply, storage and distribution of re-circulated sterilized goods.
- It should be self-drying after disinfection in hot water (min.+85°C)
- It should be sturdy, jig-welded trays maintain their size and shape even if handled carelessly.
- It should be both nest able and stackable There should be special wire support to help making baskets both stackable (when the supports are folded into the basket) and nest able (when the supports are folded out)
- The top frame should be designed such that it should serve as a handle grip for easy carrying even when heavily loaded.
- There should be no sharp edges or wires.
- The surfaces should be smooth to assure easy cleaning in a washer-disinfector.
- The baskets should be made of electro-polishes heavy-duty stainless steel (304) and should have a rigid bottom frame that gives space for airing between goods and work surfaces and allow use on roller belt and chain conveyors.
- It should be designed and manufactured in accordance with high quality specifications to assure long lifetime.

30. Modular Sterilizing Basket- Medium

- Size : 585x395x100 mm
- Area : Various movement
- It should be modular design with standard SPRI sizes and high precision and should be designed for sterilizing / processing as well as easy handling and management of the supply, storage and distribution of re-circulated sterilized goods.

- It should be self-drying after disinfection in hot water (min.+85°C)
- It should be sturdy, jig-welded trays maintain their size and shape even if handled carelessly.
- It should be both nest able and stackable There should be special wire support to help making baskets both stackable (when the supports are folded into the basket) and nest able (when the supports are folded out)
- The top frame should be designed such that it should serve as a handle grip for easy carrying even when heavily loaded.
- There should be no sharp edges or wires.
- The surfaces should be smooth to assure easy cleaning in a washer-disinfector.
- The baskets should be made of electro-polishes heavy-duty stainless steel (304) and should have a rigid bottom frame that gives space for airing between goods and work surfaces and allow use on roller belt and chain conveyors.
- It should be designed and manufactured in accordance with high quality specifications to assure long lifetime.

31. Closed Sterilization Containers 300mmX290mmX110mm

- Sizes should be - 300mmX290mmX110mm units.
- Should have thermo lock drainage, steam penetration valve and stainless steel top.

32. Closed Sterilization Containers 300mmX290mmX140mm

- Sizes should be - 300mmX290mmX140mm units.
- Should have thermo lock drainage, steam penetration valve and stainless steel top.

33. Closed Sterilization Containers 300mmX290mmX260mm

- Sizes should be - 300mmX290mmX260mm units.
- Should have thermo lock drainage, steam penetration valve and stainless steel top.

34. Free standing Basket rack

- Size (LxWxH) : 1850x480x2150 mm(Single), 1850x800x2150 mm(Double)
- Quotations should be offered for both single and double basket storage racks to store wire baskets in sterile storage and/or as pre-storage of clean packed goods.
- The rack should be designed as an open unit to promote aeration of sterilized goods and to make inspection of stored goods as easy as possible.
- Should provide rigid, horizontal guide-rails, consisting of 50 x 20 mm steel profiles for loading and unloading the baskets by sliding the baskets on rail.
- The guide-rails should be welded to a robust support column mounted on a rigid floor stand.

- The columns should be joined by support frames on top and below the base of the rack.
- To facilitate cleaning of the floor, the base should have a rigid construction that minimizes the number of legs needed for support.
- Each leg should have an adjustable foot (± 25 mm).
- The rack should be made of SS.
- The single rack should be a free-standing section that holds 5 baskets in each vertical.

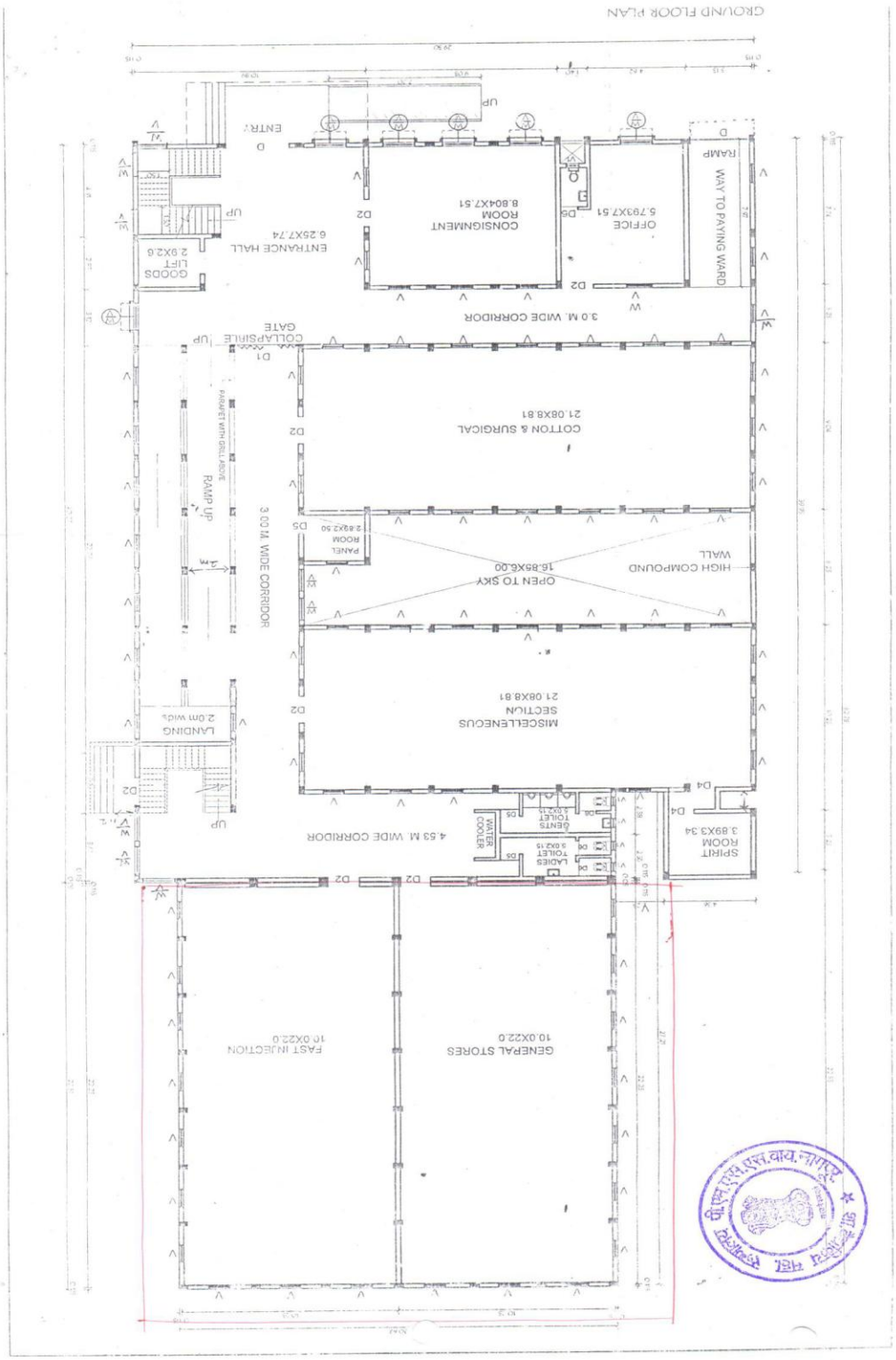
35. Basket Trolley

- Should be suitable for transport of empty, stacked /nested, modular wire sterilization basket.
- Should be mounted on a 4 swivel castors of 75mm dia.
- Should be made up of stainless steel.
- Should be provided with handle for easy transport.
- Load capacity approx. 150 Kg.
- Dimension should be (approx.): 750mm(L)X500 mm(W)x150 mm(H)

36. Pass Box

- Area : Dirty to Clean supply, ETO to Sterile supply & Sterile Issue
- Size : 600x600x600mm, internal
- Should be made up of SS 304 sheets with double wall construction
- Should have UV lights for safe storage of components
- UV light should automatically switch off when any one door is opened
- Pass-through chamber should be based on electrical sliding hatches and should fit all types of standard racks.
- The chamber should consist of two electrically operated sliding hatches.
- Each hatch should have its own 24 DC motor that powers a drive belt and ensures smooth operation, as well as its own convenient push-button control to ensure that both hatches cannot be opened at the same time.
- The control should feature two modes of operation to open or close the hatch with a press button mechanism.
- Should have door interlocking to prevent simultaneous opening of both the doors
- Should have toughened glass panelling for easy visibility.

Drawing for the Earmarked Site for CSSD in Nagpur GMC is as follows: However all Bidders are advised to have site visit for exact estimation.



The drawing for Super Speciality Hospital Nagpur (Approx. Sq. Ft. Area. 3000) is not available. The Bidders are advised to visit site for site planning and estimation.

KEY PLANNING AND DESIGN PARAMETERS:

- There should be no back tracking of sterile goods
- Materials/ Items from contaminated and sterile areas should be separated from each other.
- There should be separate receipt and despatch areas
- The clean and dirty areas should be separately by a physical barrier
- The floor surface should be smooth, impervious, non-skid and robust
- Light fittings should be recessed
- Relative humidity should be maintained at 45±5%
- The clean area should be provided with air locks and maintained at positive relative to the adjoining spaces. The minimum ventilation rate should be 6 to 10 air changes per hour
- In order to maintain and control a clean environment, it should be ensured that there should be no exposed light fixtures, pipes, ducts or cables to collect lint and dust
- The walls and ceilings should be of a smooth surface to facilitate easy cleaning

Typical layout plan of CSSD both for GMC & SSH, Nagpur is attached herewith. However bidders are strongly advised to coordinate with GMC & SSH, Nagpur authorities before planning CSSD.

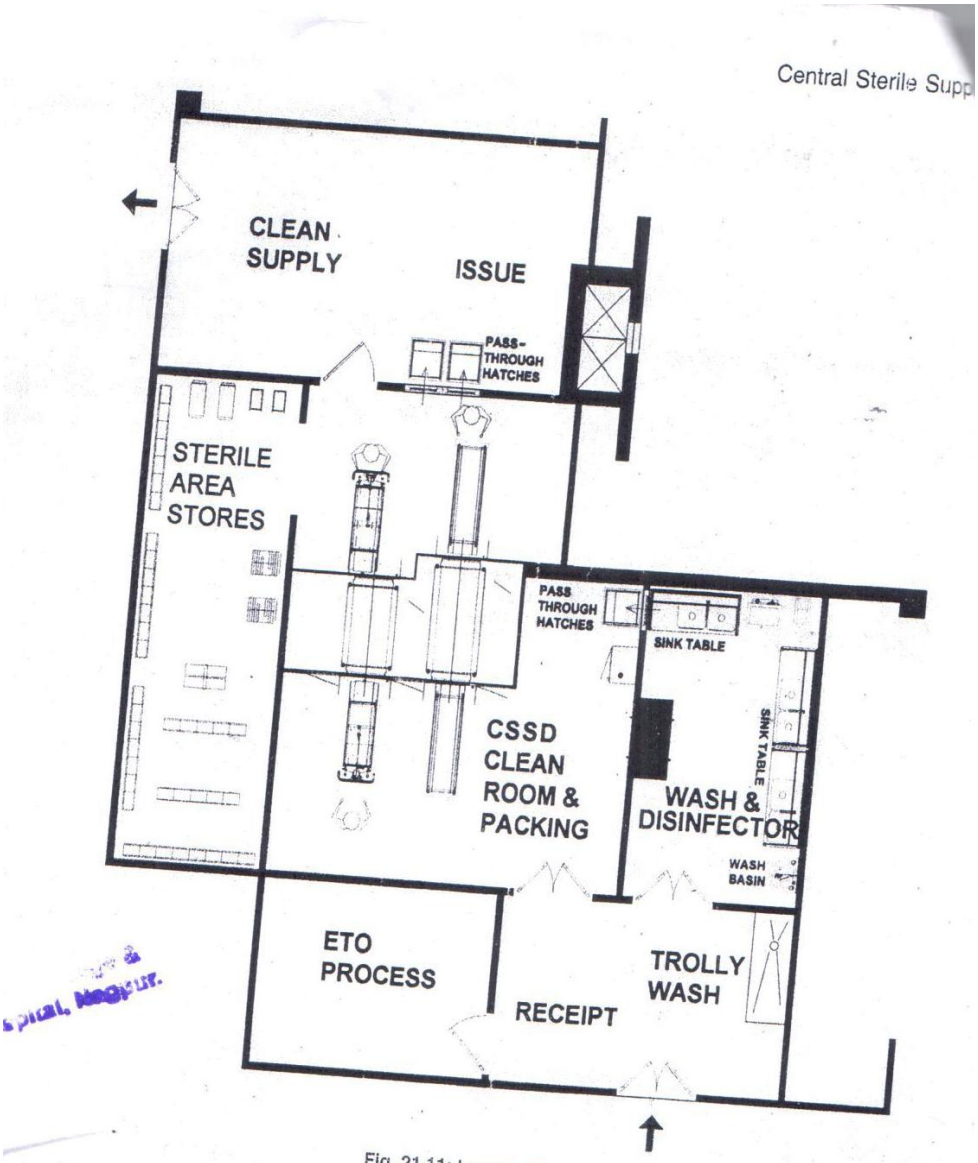


Fig. 21.11: Layout plan