Addendum No:–I

Sub: Tender for Supply, Storage, Installation, Testing, Commissioning and Handing Over of Mortuary for Medical College and Hospital at Sundargarh Odisha"- Revised technical specification- Reg.

Ref: Tender No. ERO/MMD/731/1124 dtd. 21.11.2019

With reference to the above, this addendum no. I with revised technical specification (Enclosed as Annexure I) shall be part of the tender documents

All other Terms & Conditions of NIT No. ERO/MMD/731/1124 dtd. 21.11.2019 remains unchanged.

GGM (Contracts)
Engineering Projects (India) Ltd.

Date: 29.11.2019
Annexure I

TECHNICAL SPECIFICATIONS

(Revised)

MORTUARY EQUIPMENT
1. **MORTUARY CHAMBERS—MICROPROCESSOR CONTROLLED**

Mortuary storage system is designed for storing cadaverous under cool condition to prevent decomposition. These are latest development in Mortuary technology offering vast space saving advantage over the conventional type together with greater hygiene. Useful for General, specialty Railways Defence Hospital & Airports etc.

Double-walled with pre painted CRC/pre fabricated PUF Insulated panels for outer surface and stainless steel inner chamber Pre-engineered Polyurethane foamed (PUF) Panels are manufactured using environmental friendly non CFC gases or blowing agents. The Polyurethane foam insulation with a density of 40 kg per cubic meter has excellent insulating properties. The panels are fastened together by means of Cam-locks actuated by an Allen Key. A gasket is provided on both the inside and the outside edges of the tongue sections. Front opening, hinged insulated doors lined with magnetic gasket, handle and lock arrangement with keys in duplicate for individual dead bodies.

Tray to carry dead bodies are designed in one piece, Stainless Steel, with a tubular edge and handle at both ends to carry dead body easily to avoid any moving part inside the cabinet and for easier maintenance and cleaning, unitary type, factory assembled, ready to install type refrigeration unit is incorporated outside the chamber. Temperature –20°C to +50°C is maintained by hermetically sealed refrigerator compressor unit and is controlled by an automatic electronic solid state digital Suitable to work on 220V, single phase, 50 Hz. AC supply.

**Mortuary Carriage Assembly :**

The carriage consists of a three piece assembly which consists of a stationary frame, a lower Carriage and an upper carriage. The lower and upper carriage assembly is riding on wheels and tracks that allow easy telescopic action. The complete assembly is locked when returned to closed position.

Microprocessor based Temperature controller cum indicator is mounted on front panel, provided on front top, along with pilot lamp, main switch etc. Supplied complete with trays, cord and plug.

Suitable to work on 220 V, single phase, 50 Hz, Ac supply.

Available in following sizes :

• Three bodies
Optional Accessories:

- Suitable Stabilizer

Three bodies .....5 KVA

- Outer body can be made of Stainless Steel instead of mild Steel Sheet.

Optional: Foul Order Treatment De-Odorizing System

This System comprises of Activated Carbon of a particular grain size for max absorption, the filter is of Honey-Comb design so that the activated carbon does not collect at one place due to weight of the granules, It absorbs foul smell & leaves no smell outside and almost not noticeable even after on opening the door while loading & unloading Three bodies.

ITEM AUTOPSY TABLE

with Integrated Down draft system - height adjustable

The Autopsy table is mounted to a central support column and is made entirely from stainless steel 304 grade. Through a three-piece, removable, perforated test area, all unsanitary orders are safely vacuumed away. The work surface is equipped with a high surrounding border, and features a negative inclination to the waste sieve (detachable). A seamlessly welded basin with a surrounding profile border is affixed to the end of the table. A tub with drainage channel is located under the perforated work surface. An integrated sprinkler system guarantees that the table is continuously sanitized. All power connections, including the air duct, are built into the base. The table is to be connected to the side-mounted ventilation system, which has a minimum capacity of 1000 m3/h. The Autopsy table includes the following features:

Hydraulic Height Adjustable & Exhaust System

Features:

- Self cleaning / washing sprinkler on sides
- Central support column with 2 access doors
- Basin W / D / H 400×500×200 mm
- Knee-operated mixing tap for cold and warm water
- 3 m shower hose with hand sprinkler
- 2 splash proof electrical outlets
- 2 buttons for height adjustment
- Regulator valve for integrated sprinkler system
- 3-piece work top with large waste basin/sieve insert
- Circumferential perforation for safe removal of all odors
• Height adjustable from 750 to 1000mm

Dimensions (mm) : 2600 (W) × 850 (D) × 750/1000 (H)

Carrying Capacity : 200Kg.

Dead Weight : 250Kg.

Material of Construction : S.S. 304 grade.

**CADAVER WEIGHING SCALE**

Length of the floor scale would be 4’ to 6’, Sturdy platform for keeping the body, made of stainless steel, size : 6’ x 21/2’ x 4 “, Provided with the digital display to indicate the weight rapidly. The digital display meter enclosed in dust proof, stainless steel enclosure and can be mounted on the wall. Would be able to perform under rigorous conditions in mortuary room. Capacity: 0-200 Kg with an accuracy of 200 Gms. Fully made of stainless steel.

**ITEM AUTOPSY BOX**

Stainless steel box containing all necessary instruments.

**Contents:**

1 cartilage knife 8 cm blade, 1 mallet 20 cm, 1 autopsy knife 13 cm blade, 1 straight rachet 20 cm, 1 pair of bowl scissors 20 cm, 1 pair of rib shears, 1 pair of straight Liston sheers19 cm, 1 Amputation saw, 1 pair of dissection forceps 1×2T, 16cm, 1 Weitlaner retractor, 1 pair of dissection forceps without tooth 16 cm

**ITEM AUTOPSY CASE**

Strong wood case. Suitable for all types of anatomical pathology.

**Contents :**

4 dissection scalpels, 1 rachet, 1 cartilage knife, 2 retractors with 2 double claws, 1 autopsy knife, 2 double tubed insufflaters, 1 pair of incision scissors 14.5cm, 2 olivaires stylets, 1 pair of bone shears, 4 suturing needles, 1 pair of bowl scissors, 1 tape measure, 2 dissection forceps 1×2T 6", 8" (One each), 1 100 cc test tube, 1 amputation saw, 2 chisel, 1 hammer
**ITEM AUTOPSY SAW**

Autopsy Saw is an essential instrument for the Pathologist. High speed oscillating action quickly cuts through bone without harming soft tissue. Therefore exposure to infected tissue is reduced and there is no need for a blade guard. The saw may be used for removing the skull cap, making linear cuts or taking small bone specimens. It is durable and easy to handle.

Salient Features:

- Accept all styles of autopsy blades.
- Complete with large section blade plus 2 arbors.
- Based on high-speed oscillation principle.
- 8-10 feet long electrical cord with hospital grade plug.
- On/Off sliding switches design.
- Hard piece to have firm grip area.
- Safety flange over hand piece.

**ITEM CADAVEROUS INJECTOR**

For injecting Formaldehyde solution into Cadaverous at much higher speed than normal gravity process. Unit is fully covered & mounted on a portable trolley having four castor wheels for easy movement.

Unit consists of one air compressor fitted with 1/2 Hp Crompton /AUE/Equivalent Make Motor which is connected with a Stainless Steel Tank of 10 liters capacity meant for storing and injecting the solution with built in level Indicator and top liquid filling nozzle with cap.

Tank is fitted with a safety valve, pressure gauge and rubber tubing having provision for injecting the solution. Supplied with 2 sizes of cannulae.

Suitable to work on 220 volts, 1ph 50 Hz, Ac supply.

**WALL MOUNTED AUTOPSY SINKS**

wall mounted center approach autopsy sink provides all of the features normally found in typical pedestal type autopsy table without the space requirements. The autopsy cart
overhangs the autopsy station allowing fluids to drain directly into the sink. On each side of the sink are dissection areas of equal size with removable and interchangeable grid plates.

The dissection area includes grid plates which are elevated above a sloped surface that drain directly into the sink. Wall mounted design allows for easy floor cleaning.

**STANDARD FEATURES**

A. Integral Sink (38” x 20” x 6”)
B. Backsplash
C. Removable grid plates (4)
D. GFCI Electrical outlet (2)
E. Hydro aspirator
F. Fixture w/swing spout (2)
G. Body rinse (2)
H. Hand spray (2)
I. Large instrument drawer (2)
J. Main circuit breaker switch

**AUTOPSY CARTS**

The elevating (hand crank) autopsy carts can be used in conjunction with any or wall mounted Autopsy sinks. The frame design features a hand lifting mechanism that elevates one end of the autopsy cart allowing for a sloped surface. The downward sloped edge of the cart frame will latch onto the sink of needed. Standard features includes an elevating mechanism consisting of two hydraulic cylindrical actuated by a hand crank assembly with 7-1/2” (19cm) of travel.

The features are heavy-duty 8” diameter non-corrosive powder coated wheels. During transport, one caster is swivel locked for easy mobility. When inactive, the casters can be locked for easy mobility. Weight capacity is 375 pounds.


And applies: design, engineering, manufacturing and installation of equipment distribution of supplies for morgue, pathology, histology and necropsy applications.
STANDARD FEATURES

Elevating mechanism: hand cranked mechanical/hydraulic lift system with 7-1/2” of lift adjustment. Cart frame: 1-1/2” (3.8 cm) heavy gauge stainless steel tubing. TIG type welding is continuous with an approximate t1/8 inch(31cm) radius bead. Weld fillets are brushed clean removing any burrs or discoloration.

AUTOPSY CARTS

DESCRIPTION

Autopsy cart hand crank chassis

CADVER LIFT CONVEYOR STYLE WITH ADJUSTABLE HANDLE

CADEVER LIFT CONVEYOR STYLE

STANDARD FEATURES:

A. End access release latch (both ends)
B. Jc100body tray positioning pad
C. Push handle, removable to (3) different positions
D. Hand held lift controller
E. Digital weight scale & controls
F. Heavy-duty casters w/barkers
G. Positioning lock lever
H. Push handle, receivers
I. Battery charger outlet
J. Power on/off w/ key lockout
K. Power distribution box, w/ battery & charger

EXCELLENT FOR SHORT AND LONG TERM SPECIMEN STORAGE

Vented Storage Cabinets

When storing wet tissue specimens vented storage cabinets are a necessity in any laboratory. Residual formalin that evaporates from the specimen storage container and vapor leakage from the storage container accumulates in the storage cabinet. The vented storage cabinet will eliminate the residual formalin fumes when tied into the building ventilation system. Available on both wall mounted and free standing cabinets,
the cabinet ventilation option can be added to any cabinet. The cabinets feature glass or solid doors. Cabinets can be easily cleaned with any of disinfectants, Stainless Steel Wipes or cleaner formulated for stainless steel.

**Standard Features**

- All shelves are perforated with 1/2" diameter holes on 3" centers
- A diameter x 2 1/2 high ventilation cuff is centered on the top of each cabinet.
- Specifically designed doors allow for air infiltration to accommodate the negative pressure induced for Solid Door and Cabinet Ventilation (Solid Door) and (Glass Door)

Tall Cabinets

Cabinet Ventilation

**DISSECTION TABLE**

Dissection table dip tank is designed to keep cadavers and anatomic specimens fully submerged in fixative solution for prolonged storage, is ideal for anatomy classes at any teaching hospital or university. The tank helps maintain moisture content and the natural condition of stored tissues.

Storage is accomplished by placing cadaver or specimens on the elevating tray and subsequent lowering of tray into dilative solution. Body tray handles control this movement, pivoting to raise or lower tray and are located on either end of tank. Positive support latches are provided to securely and safely lock the tray and cadaver in the raised position for further examination or study.

**Standard features**

**TANK:** Tank is constructed with broad flanges, easing the loading and unloading of specimen, while offering extra strength to the tub. The deep well tank is constructed of heavy duty 14 gauge stainless steel and welded to and equally string 14 gauge tubular frame, ensuring long service life.

**HOOD:** The hood easily pivots to the side while dissection is taking place. Materials is 18-gauge stainless steel with a #4 satin finish

**BODY TRAY FRAME:** A standard body tray frame is provided which will saddle the body. The corners are open to allow for fluid drainage during dissection. The frame is fabricated of 16-gauge stainless steel with a #4 satin finish
**FRAME:** The frame is constructed of 1-1/2” square stainless steel tubing with continuous fillet welds. All welds are brushed clean removing any weld burrs or discoloration.

**CASTERS:** Casters are diameter With heavy duty swivel wheels complete with swivel locks and wheel brakes.

**FABRICATION:** All welding is TIG type welding with only stainless steel as a filler media. Alt exposed welds are ground smooth and regained to match the adjacent factory mill #4 satin finish unexposed welds are free of burrs and discoloration.


**PRODUCT DESCRIPTION**

Lever Elevating System

**STANDARD FEATURES:**

A. Perforated grid plate  
B. Drain valve  
C. Stainless steel hood  
D. Removable drain pan  
E. Hood swing latch  
F. Heavy duty caster w/wheel brake-swivel lock  
G. Heavy duty cart frame  
H. 6” ventilation stub  
I. Elevating crank wheel

**FEATURES DESCRIPTION**
DISSECTION OF CADAVERS

A downdraft table designed for the dissection of cadavers: The downdraft system provides a safe environment, completely removing formalin vapors down and away from the user. The hinged cover will securely and discreet conceal the cadaver, during the dissection the hinged covers lock neatly and secretly under the table and out of the way. The dissecting table has a removable perforated grid plate and recessed top, eliminating the need for a body tray. Built with a positive slope, the table drains toward one end into a bucket (optional) under the table frame. A PVC stop the flow of fluids while emptying the bucket.

Ventilation is connected into the building ventilation system either on one end or both ends of the dissecting table. You must choose one system, either one baffle (single ducting exhaust or two baffles (dual duct connection the connection can be made to a flexible duct that extend from the ceiling or floor.

STANDARD FEATURES

**Table Top Downdraft:** Designed to hold a fitted perforated grid plate, the table top features fully welded construction and a heavy-duty undercarriage sub frame

**Frame:** The sturdy frame is fabricated from 1-5/8” diameter, heavy wall stainless steel tubing and includes two cross leg supports and two lateral supports Material finish: #4 satin Casters: Casters are 5” diameter with heavy duty swivel wheels complete with swivel locks and wheel brakes

**Hood:** The hood end caps are finished with continuous welding
**Undercarriage Sub-Frame:** "U I' channel type design using 11gauge stainless steel and continuous welded

**Duct:** Chose one system, (dual duct) or (single duct).

**ISO:** Quality Management System in compliance with ISO 9001:2008 and applies: Design, Engineering, Manufacturing and Installation of Equipment Distribution of Supplies for Morgue, Pathology, Histology and Necropsy Applications

**OPTIONAL FEATURES**

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<td>Bridge Style Leg Rests.</td>
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