

TECHNICAL SPECIFICATION OF KITCHEN EQUIPMENT

Scope of Work : Supply, Installation, Testing, Commissioning of Kitchen equipment and Turnkey work and handover to the District hospital premises of Dickoya, Srilanka including services of Defect liability period as per contract.

1. Preparation table with sink

Size- 1200x600x850+150

Top of 16 swg S.S-304 sheet on MS Angle 25x25mm frame work duly rust proof painted on Structure made of S.S-304 square/Tubular pipe. Sink made of 14 swg S.S-304 on LHS/RHS and under shelf made of 18 swg S.S-304 sheet. Vertical legs of S.S-304 round pipe of 16 swg. 1.5" dia with nylon adjustable feet. The top is fitted with stud welded bolts with the frame for sturdy and stronger grip.

2. Stock Pot Stove

Size- 600x600x600

Top of 16 swg. S.S-304 Sheet on M.S Angle frame work duly rust proof painted on SS Tubular/ Square legs with adjustable bullet feet for uneven floors. Fitted with United/Sarna make heavy duty burner with pilot lamps with individual control valves and heavy duty cast iron pan support.

3. Exhaust hood

Size- 3000x1600x600

Entire exhaust is made of 20 swg.S.S-304 Sheet with S.S-304 baffle filters. Fitted with grease collection tray and hung with metal fasteners.

4. Bulk Cooker (Tilting Boiler)

Capacity-80 Ltrs.

Double walled glass wool Insulated all S.S-304 Sheet body. The outer Most is of 18swg S.S-304 Sheet body. Fitted with heavy duty high pressure burner with pilot lamp & individual control valves. Fitted with water inlet & water outlet valve & strainer at the bottom level of the boiler also fitted with a Top opening lid with insulated handle. The entire boiler is mounted on heavy duty tubular legs. Also fitted with a heavy duty tilting gear to extract the boiled food.

5. Brazing Pan (Tilting)

Capacity-80 Ltrs.

Double walled mineral wool insulated all S.S-304sheet body on heavy duty tubular legs with adjustable bullet feet. Fitted with heavy duty burner with pilot lamp with individual control needle valve. Fitted with tilting gear to extract contents after cooking & water inlet valve. Also fitted with top opening lid with insulated handle.

6. Exhaust Hood

Size- 2700x1200x500

Entire exhaust is made of 20 swg.S.S-304 Sheet with S.S-304 baffle filters. Fitted with grease collection tray and hung with metal fasteners.

7. Chapatti Plate cum puffer

Size- 1500x600x850

Structure made of mild steel angle frame duly rust proof painted . Top of 12 mm mild steel, front Panel and under shelf 18swg S.S-304sheet, vertical legs of S.S-304 round pipe of 16swg. 1.5" diameter with nylon adjustable feet. Complete with CI perforated grill for puffing of chapattis, heavy duty high pressure RV burner pilot, individual control valves Indian Oil corporation approved.

8. Chapatti Rolling Table

Size- 1200x4500x850

Top made of 16swg S.S-304 sheet on MS Angle frame work with rust proof painted on S.S-304 square pipe 25x25mm/Tubular legs frame work and under shelf made of 18swg S.S-304 sheet. Vertical legs of S.S-304 round pipe of 16 swg. 1.5" dia with nylon adjustable feet.

9. Exhaust hood

Size- 1500x750x500

Entire exhaust is made of 20 swg.S.S-304 Sheet with S.S-304 baffle filters. Fitted with grease collection tray and hung with metal fasteners.

10. Wall Cabinet

Size- 900x450x600

All covered and door of SS-304 with lock and two Shelves constructed of 18 swg S.S-304 sheet & supports constructed from the 16 swg sheet

11. Marble Top Table

Size- 900x600x850

Top of Marble on MS Angle 25x25mm frame work duly rust proof painted on Structure made of S.S-304 square/Tubular pipe. Under shelf made of 18 swg S.S-304 sheet. Vertical legs of S.S-304 round pipe of 16 swg. 1.5" dia with nylon adjustable feet. The top is fitted with stud welded bolts with the frame for sturdy and stronger grip.

12. Work Table with sink

Size- 1200x600x850

Top of 16 swg S.S-304 sheet on MS Angle 25x25mm frame work duly rust proof painted on Structure made of S.S-304 square/Tubular pipe. Sink made of 14 swg S.S-304 on LHS/RHS and under shelf made of 18 swg S.S-304 sheet. Vertical legs of S.S-304 round pipe of 16 swg.

1.5" dia with nylon adjustable feet. The top is fitted with stud welded bolts with the frame for sturdy and stronger grip.

13. Dough Kneader

Capacity- 25 Kg

Body completely constructed of heavy duty cast iron with gear box mounted on the top the mixing bowl of S.S-304 sheet 14 swg with S.S-304 arm to mix the dough and is operated electrically with heavy duty motor of 1 hp. Motor shall be S1 type of IS : 325 standard (Latest version) and of Kirloskar/NGEF/Siemens/ABB/GEC/ Crompton Greaves make.

14. SS stand for Chopping blocks with boards

Size- 450x300x600

All S.S-304 sheet body to hold poly carbonate chopping boards-4Nos.

15. Potato Peeler

Capacity- 10 Kg/charge

The heavy duty peeling drum is made of 18 swg. SS sheet on three nos tiny legs with adjustable bullet feet and a rotating disc of SS sheet being connected with heavy duty motor of S1 type of IS:325 standard, single/three phase and of Kirloskar/NGEF/Siemens/ABB/ GEC/Crompton make. Also pasted with emery granules inside the drum and on rotating disc to peel and fitted with water inlet valve and aluminum casting/SS sheet our pour to extract peeled potatoes. Capacity-10 Kg

16. Four door Refrigerator

Size- 1200x750x2000

Structure made of mild steel angle frame duly rust proof painted. Body completely constructed of S.S-304 sheet double walled insulated with puf, inner tank of 22 swg and outer of 20swg S.S-304 sheet the inner chamber will have 3 nos. Of wire mesh made removal shelf with height adjusters mounted on S.S-304 channels. The refrigerator will have 2 nos. S.S-304 double walled insulated 18 swg doors spring activated with locking arrangements. The refrigerator is mounted on four S.S-304 tubular legs with S.S-304 bullet adjustable feet. The compressor and condenser unit of Emerson/ Techumshah/Kirloskar/Equivalent make with Automatic temperature controller and temp. Indicator.

17. Soiled Dish Landing Table with glass Rack with Garbage chute

Size- 1500x600x850

The marine edged top made of 16 swg SS: 304 sheet on MS Angle frame work, duly rust proof painted & stud welded for stronger grip and cross bracing of 18 swg SS: 304 sheet. Vertical legs with nylon adjustable feet. A Garbage chute is on LHS & a glass is fitted with the D.L.T.

18. Storage Rack 5 tiers

Size- 900x450x1800

All shelves are made of 18 swg SS: 304 on 4 nos round/square legs with adjustable bullet feet. All the shelves are having 'C' Channel through to accommodate maximum load bearing ability

19. Clean Dish Table

Size- 1500x600x850

Top 16 swg S.S-304 sheet on MS Angle frame work duly rust proof painted & stud welded on SS. Tubular/square legs with adjustable bullet feet. Also fitted with SS slide out beneath to hold the plate/glass racks of 500 x 500 mm

20. 3-Sink Dish wash Unit

Size- 1800x600x850+150

Structure made of SS-304 square pipe 25x25 frame work. Top & sink made of 16 swg and under shelf made of 18 swg SS sheet. Vertical legs of SS round made of 16 swg 1.5 inch dia. With Nylon adjustable feet.

21.Mobile Garbage Bin

Size- 900x600x900

Structure made of 16 swg thick SS-304 sheet, Angles, tubes/square channel with two tier 18 swg thick SS-304 shelves and Push cart handle and 4-swiveling wheels.

22.Pot Rack-4shelves

Size-1200X600X1650

The heavy duty 4 tiers rack are made of S.S-304 square pipe (38mm & 25mm) and duly welded with 4 nos. uprights on nylon adjustable feet for uneven floor.

23. Pot wash Sink

Size- 1500x750x850+150

Structure made of SS-304 square pipe 25x25 frame work. Top & sink made of 14 swg and under shelf made of 18 swg SS sheet. Vertical legs of SS round made of 16 swg 1.5 inch dia. With Nylon adjustable feet.

24. Pot Wash Table

1200x600x850

Top of 16 swg S.S-304 sheet on MS Angle 25x25mm frame work duly rust proof painted on Structure made of S.S-304 square/Tubular pipe. Under shelf made of 18 swg S.S-304 sheet. Vertical legs of S.S-304 round pipe of 16 swg. 1.5" dia with nylon adjustable feet. The top is fitted with stud welded bolts with the frame for sturdy and stronger grip.

25. Juicer

With asynchronous Single phase, heavy duty and quiet motor. Stainless steel bowl and filter grid rubber. Aluminium casting and stainless steel construction bowl sustainer. Multipurpose combi machine; drink mixer, citreous juicer, and blender. Separate motors for each function.

26. Double Deck Oven (Electrical)

Capacity-40Ltrs.

Double Deck and Double walled mineral wool insulated body will have 18 swg. SS-304 sheet in front and doubly coated heat resistant MS sheet inside and MS plate on base. Fitted with 6 kw heating element with auto temp. controller and indicating lamps. The front opening insulated door is fitted with see through toughened glass and illumination in side to watch the proceedings with on/off switch. The entire oven is mounted on heavy duty SS legs on castor wheels. Also fitted with heat extracting duct behind to cool out after the operation.

27. Milk boiler

Capacity -50 Ltrs.

Triple walled mineral wool insulated all SS sheet body on SS legs with adjustable bullet feet. The outer most wall and the second wall is mineral wool insulated and the other wall water proof and fitted with water inlet, outlet, over flow valves and water level indicator. Also fitted with 3.0 kw immersion type heating element with auto temperature controller and indicating lamps and a heavy duty gun metal faucet. A top opening lid with insulated handle is fitted. Also fitted with two nos, insulated handles on either sides to carry.

28. Two Burner with Cooking Range

Size-48"x24"x34"

Top of 16 swg. SS Sheet on M.S Angle frame work duly reust proof painted on SS Tubular/ Square legs with adjustable bullet feet for uneven floors. Fitted with 2 nos. United/Sarna make heavy duty burner with pilot lamps with individual control valves and heavy duty cast iron pan support. Also fitted with an oven beneath with 3.0 Kw heating elements with auto temp. controller & indicating lamps.

29. Exhaust hood

Size-3000x900x600

Complete frame work 20/22swg. Complete joints are air tight insulated weather proof mechanically painted on the Upper surface. S.S-304 filters-island type.

30 Hand Wash Basin

Size- 600x450

Structure made of SS-304 square pipe 25x25 frame work. Top & sink made of 16 swg and under shelf made of 18 swg SS sheet. Vertical legs of SS round made of 16 swg 1.5 inch dia. With Nylon adjustable feet.

31.U.C Refrigerator

Size- 1650x600x850

Top of 18swg S.S-304 Sheet and sides & inner wall covered with 20 swg S.S-304 Sheet and Puff insulated provided with two doors & two S.S-304 Wire meshed adjustable trays powered with heavy duty Emerson/ Techumshah/Kirloskar /Equivalent make condensing unit with Auto temp. Controller and indicating lamp.

32. Tray Track Trolley

Size- 900x600x900

Structure made of S.S-304 Square/Tubular pipe and MS Angle 25x25mm frame work duly rust proof painted .Push cart handle. Two trays made of 18 swg S.S-304 sheet, Vertical legs of S.S-304 round pipe of 16 swg. 1.5" dia with swiveling castor-4 Nos.

33. Hot Food Service Trolley

Size-900x600x900

Double walled insulated with glass wool. Inner side made of 18swg & outer side made of 20 swg as Stainless steel 304 sheet with 4 no heavy duty Castor wheels (4"/6" dia) with 2 wheels locking arrangement and push cart type handle constructed from ss pipe. Trolley has Immersion type 3Kw heating elements with auto temp. controller & indicating lamp with temp. Indicator to keep 4 Nos round containers with lids to keep food hot vegetable and one rectangular for container for to keep chappaties. Also fitted with one middle and bottom shelves with lockable door. Rubber cushion to be fitted at the corners to prevent damage during transportation.

34. Weighing Scale Electronic

Capacity-200kg

Electronic weighing scales of standard make to weigh upto 200 kg. The certificate from Weights & Measures Dept. is to be attached with the machine, duly certifying the serial no.

35. Storage Rack with 5 tiers for Vegetable store

Size- 900 x 450 x1800

All shelves are made of 18swg S.S-304 sheet on 4 nos round/square legs with adjustable bullet feet. All the shelves are having "C" channel through to accommodate maximum load bearing ability

36. Onion/ Potato Bin

Size-900x600x750

The entire bin is made of S.S. wire meshed body on heavy duty castor wheels. Fitted with top opening lid and the inclined bottom to have a lockable door to extract.

37. Cereal/Atta/Maida Bin

Size-900x600x900

The entire bin made of 18 swg S.S-304 sheet on tiny caster wheels & with top opening lid.

38. Cold Room

Room size- 2500 x 2500 x 2400

Temperature -0 to 4 degree centigrade, Insulation: Panels 60mm thick PU at 40-42kg density,PCGI exposed exterior 0.5mm thick sheet,PCGI exposed exterior 0.5mm thick sheet, PCGI interior 0.5mm thick sheet, floor interior and exterior of 0.5mm thick PCGI exposed sheet, Ceiling exterior PCGI, interior PCGI Sheet 0.5mm.Vertical, Panels Joint with Cam lock coupling in Tongue & Groove arrangement. Thickness of PUF Panels (for Wall, Ceiling & Floor)- 60mm.Wall & Ceiling panels Finish- Internal: SS 304 External: PCGI Galvanized Iron Sheet. Flooring- Kota stone by client. Density of Panels-40kg/cub.m No. of Doors- One for Main Room Type. of Doors- Over Lapped or Flash Type Door Size-900mm x 1950mm. Accessories Included in the scope of Supply-1. Door Alarm 2. Lock Defeat mechanism 3. Light Inside the

cold room. 4. Handle, Hinges & Locks. 5. Microprocessor based digital control. Panels. 6. Panel Accessories & necessary Hardware. Technical Feature of PUF Panels, Doors, & Accessories: Individual Panel is manufactured with closed cell Rigid Polyurethane foam, injected at high pressure, which secures the bond with facing material to form a single piece construction. RPUF insulation is CFC free and has Zero ODP- Ozone Depleting potential. Core density of 40kg / Cu.M Panel finish is designed to resist many chemicals including most common cleaning agents. The panels have fire rating to BS.467 part 7, clause 1. Wall, floor & ceiling panels joined with Tongue and groove mechanism with cam lock system. The compressor and condenser unit of Emerson/ Techumshah/Kirloskar make with Automatic temperature controller and temp. Indicator.

39. Storage Rack 5 tiers

Size- 900x450x1800

All shelves are made of 18 swg SS: 304 on 4 nos round/square legs with adjustable bullet feet. All the shelves are having 'C' Channel through to accommodate maximum load bearing ability

40. Storage Rack 4tiers

Size- 800x450x1200

All shelves are made of 18 swg SS: 304 on 4 nos round/square legs with adjustable bullet feet. All the shelves are having 'C' Channel through to accommodate maximum load bearing ability

41. LPG BANK

6 + 6 (One set working another set standby) LPG Cylinder Bank of 14.2 Kg each LPG cylinder with :Class'C' seamless steel pipe conforming to IS:1239 (Latest version) with Pressure Gauges (0-15 PSIG & 0-5PSIG, dial type).Pressure reducing stations complete with Flanges & accessories and Isolation valves having ball valves of approved makes with LPG installation certificate having carbon steel body, SS ball and PTFE seat, Laboratory tap and all other fittings such as tees, reducers, unions, elbows. Steel Grilled cage of area 12 ft x 4ft.with lockable door for keeping 6 + 6 Cylinder Bank. The piping shall be joined through welding by using welding electrodes of ISI marked only. The LPG piping works shall be duly supported with ceiling, on walls etc. by providing adequate supports. In no case the spacing between two supports shall exceed 1.5 meter. Adequate measures shall be taken to prevent pipe from undue stresses, sagging etc.The piping shall be free internally and externally of cutting burrs, loose scales, dirt, dust and other foreign matters before installation is completed.All care shall be taken to prevent rusting of piping during installation by providing red oxide primer coating. Suitable sleeve of GI/wood shall be provided wherever the pipes are crossing through the walls/slabs etc. The LPG shall be providing keeping a minimum distance of 100 mm from the electrical wiring system. On completion of installation, the LPG manifold shall be complete with all accessories and individual components/parts which are subjected to cylinder pressure shall be capable of withstanding a test pressure twice the working pressure or 26 Kg/sq.cm whichever is higher. Pressure testing of complete LPG system and obtain the pressure test certificate from appropriate regulatory authority. All the fittings used for installation of LPG line system shall conform to relevant BIS codes.The complete LPG pipeline system shall be installed in accordance with IS:6044 (Latest version), Gas cylinder rules 1981 with latest amendments,

OISD July 1995 (latest amendments). All the accessories, components used for installation of LPG pipeline system shall have the approval from Oil Company. Isolation/shut off valves shall be ball valves with installation certificate for use in LPG pipelines and shall have carbon steel body, Stainless steel ball and PTFE seat. After completion of installation, the entire pipeline system shall be given at least two coats paint as per LPG colour norms. The work of supply, installation, testing and commissioning of LPG manifold and supply system shall be carried out only by specialized agency shall have certification for carrying out similar jobs from Oil Companies like IOCL/BP/HP. The entire work of supply, installation, testing and commissioning of LPG manifold and supply system shall be carried out in accordance with directives of Oil Industry safety directorate and of Bureau of Indian Standards and using materials having necessary approvals for use in LPG installations. The contractor shall submit detailed shop drawings of LPG manifold, piping layout and piping installation details for approval. The items covered under the scope of works shall include all those ancillary items which may be required to complete the work in all respect whether specifically mentioned or not. Fire fighting arrangements for LPG Bank should be as per the guidelines of statutory body/local authority/local Government.

42. InsectocutorTwin tube

Twin tube Insectocutor/s shall be provided at suitable locations.

43. IN ADDITION TO THE ABOVE, FOLLOWING TURNKEY WORKS FOR INSTALLATION AND COMMISSIONING OF KITCHEN AT DICKOYA, SRILANKADELHI ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR :

- **Electric distribution panel** for the above Kitchen equipment complete with all switchgears, wiring and controls etc complete as per specifications and drawings. (Switch gears of L&T/ Siemens/ ABB/GE or Schneider make)
- **Electrical cabling** of IS : 1554 standard and wiring as per IS : 732 standard from MDB(Single point source) to Electric Distributional Panel and to the corresponding load points
- Providing fixing of **Electrical Gadgets** like ELCB, MCB, Light Points, Power points, Fans, Cool air Fans, Exhaust fan etc in the Kitchen room. • Number of fans, power point, bulbs/tube light. Apart from these supplies to the individual equipments with ELCB & MCB in the Kitchen room. • Installation of MCB, ACB, ELCB & OCB of Havell/Siemens/L&T/Schneider etc for Control Panel for Kitchen.
- Laying of **GI water pipe line** with necessary taps, joints, elbows, Unions and valves of GI made and IS-1239 standard (Latest version) from overhead tank (Overhead tank is at the roof of Kitchen room)to the installed machines'/users' ends at Kitchen Room.
- Installation and commissioning of **Water Softener** for softening of available ground/supply water continuously at the hardness necessary for washing and other application required for Kitchen is at least “< 50 ppm” or as per suitability of the Steam Generators/equipment. The Water Softening System shall be installed in the capacity compatible to the requirement of Kitchen equipments and system running for the assigned duration at fully loaded condition. The specimen of ground/supply water is available at the site of installation at LRSI, NewDelhi for design and selection of Water Softening System.

- Construction/laying of **Draining/Sewer system** from all the equipments/Sinks to the main drain (outside the Kitchen) with grating, proper trap and flow system and tapping.
- Arrangement for requisite **Fire Fighting** for Kitchen including approval from or as per State/Central Govt. regulation/local authority/Statutory body if required
- Additional work pertaining to Civil, Electrical, Plumbing, Sanitary and any other protections relevant as per State/Central Govt. regulation/local authority/NDMC, Furniture, Servo stabilisers, U.P.S. etc. required for successful installation testing and commissioning of the system and the offered price should include all such costs, each Schedule is to be considered a package in itself and contractor to execute the order package on a “turnkey basis”.

In addition to the above mentioned equipment/appliances, if the contractor thinks it necessary to include any other equipment/appliances, accessories etc. for the Kitchen then that may be provided after approval from Engineer in-charge.

The sizes are approximate. Minor variations in sizes shall be acceptable subject to prior approval of the Engineer.

APPROVED MAKES FOR KITCHEN COMPONENTS

1.	Air Blower	SWAM/ EVEREST/ KAY/Beta
2.	Blower/Pump/ Motor	KIRLOSKAR/ NGEF/ SIEMENS/CROMPTON/ABB
3.	Compressor	EMERSON/ TECHUMSHAH/COPELAND/DANFOSS
4.	Cable	GLOSTER/UNIVERSAL/NATIONAL/ KALINGA
5.	Aeration System	NORTON/ UEM/ V.K.ENVIROTECH/MM AQUA
6.	Butter Fly Valve	AUDCO/ KEYSTONE/ KSB/CRI/Castle
7.	Control Panel	L & T/ SIEMENS/ SCHNEIDER
8.	Valve	LEADER/ ZOLOTO /CRI/Castle
9.	PVC Pipe Class III with Fitting	FINOLEX/ SUPREME/ PRINCE/ ORI-PLAST
10.	G.I. / M.S. Pipe Heavy Class	TATA/ JINDAL/SAIL /SURYA PRAKASH/HSL/ITC
11.	MCCB/Contactor/Relay	L&T/ABB/SIEMENS/SCHNEIDER
12.	Pressure Gauges	H.GURU /FIEBIG
13.	Stainless steel	TATA/SALEM/JINDAL/MUKUND/ BHAYANDER/ AMBICA
14.	GI Sheets	TATA/SAIL/JINDAL/BHUSHAN STEEL
15.	Aluminium Sheet	BALCO/NALCO/HINDALCO

Note :

- **The bidder should attach Technical Compliance item wise with respect to the above technical specifications and turnkey work along with Printed catalogues and Manufacturer's Authorization in the techno-commercial bid.**
- **The contractor shall be responsible for the complete works including submission of working drawing and walk through view.**
- **Bidder should provide complete parts manual/Service manuals for all systems and subsystems.**
- **Final electrical safety test, system test and calibration should be done by authorized person with test instruments.**
- **All electrical accessories like cable wire, electrical outlets, switches etc, should be fire proof of reputed make, certified for electrical safety.**
- **Wherever makes have not been specified for certain items, the same shall be as per BIS and as per approval of HSCC.**
- **The contractor should provide test certificate for all materials and equipments used for Kitchen.**
- **Training of personnel of the Institute should be 10 days at least**
- **The contractor should prepare and submit layout plan to HSCC for approval before beginning of supply and installation.**