



EMPLOYEES' STATE INSURANCE CORPORATION DENTAL COLLEGE & HOSPITAL  
Sector-15, Rohini, New Delhi – 110085.

Website: [www.esic.nic.in](http://www.esic.nic.in)

### ***Notice inviting Tender***

Tenders are invited by Medical Superintendent, ESI Hospital Sector-15, Rohini, New Delhi-110085 for the supply of various Dental Equipments , Medical Equipments and Mobile Dental Van under “Two Bid System” required for ESIC Dental College & Hospital, ESI Hospital Complex,Sector-15,Rohini, New Delhi-110085.

Interested firms are requested to collect the tender form with details of the Dental Equipments , Medical Equipments and Mobile Dental Van along with others terms & conditions from Medical Officer In charge ESIC Dental College & Hospital, ESI Hospital Complex,Sector-15,Rohini, New Delhi-110085 on any working day from 10 A.M. to 3 P.M. & on Saturday from 10 A.M. to 12 noon up to 07.12.11 at the cost of Rs 200/- in the form of demand draft/Banker Cheque (Non Refundable) in favour of ESI FUND ACCOUNT No. 1, New Delhi. Tender documents can also be downloaded from Website- [www.esic.nic.in](http://www.esic.nic.in) ; in that case DD/Banker Cheque for the cost of tender document is to be enclosed with tender. Tender form is to be submitted complete in all respects along with prescribed EMD in favour of ESI FUND ACCOUNT No.1 New Delhi in form of DD or Banker cheque only.

Sealed Tender complete in all respects must be deposited in tender box kept in Medical Officer In charge 's Room (Room No.319) on IIIrd Floor up to 1.00 pm on 08.12.11. Tender received late will not be entertained.

Tender will be opened on 08.12.11 at 2.00 pm in Medical Officer Incharge 's Room (Room No.319) on IIIrd Floor in the presence of bidders or their authorized representatives. If due date of opening is declared holiday, tender will be received and opened on next working day at same time and place.

Medical Superintendent reserves the right to reject any tender or all without assigning any reason(s) thereof.

Medical Superintendent



**EMPLOYEES' STATE INSURANCE CORPORATION DENTAL COLLEGE & HOSPITAL  
Sector-15, Rohini, New Delhi-85.**

F. No.115/U/16/30/DC/3<sup>rd</sup> Year/specifications equipments

Dated: 17-11-11

M/s. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(To be returned duly completed latest by 08.12.11 till 1 P.M. otherwise tender shall not be accepted)**

Medical Superintendent, ESI Hospital, Rohini, Delhi invites open tender for Dental Equipments , Medical Equipments and Mobile Dental Van as per specifications and terms & conditions enclosed.

**Tender should be submitted in sealed envelope & super scribed a "Tender for Item No.& name of equipment quoted under Two Bid System" in the tender boxes (Item wise as described below) placed in Medical Officer In charge 's Room (Room No.319) on IIIrd Floor of ESIC Dental College & Hospital,Sector-15,Rohini,Delhi-110085 on dated 08.12.11 up to 1.00 p.m. Each Item should be quoted in separate envelopes.**

In case the Tender is sent by post it must reach in the Office of M.S. by dated **08.12.11** up to 1 .00 P.M. Proof of postage won't be considered as a claim for timely submission of tender.

**The tender shall be opened on dated 08.12.11 at 2.00 p.m. in Medical Officer Incharge 's Room (Room No.319) on IIIrd Floor of ESIC Dental College & Hospital ,Rohini in presence of bidders or their representative, who wish to be present. In case 08.12.11 is declared holiday, bids will be received and opened on next working day at the same time and venue.**

**Medical Superintendent**



**EMPLOYEES' STATE INSURANCE CORPORATION DENTAL COLLEGE & HOSPITAL  
Sector-15, Rohini, New Delhi-85.**

**Tender form for Dental Equipments, Medical Equipments and Mobile Dental Van.**

F. No 115/U/16/30/DC/3<sup>rd</sup> Year/specifications equipments

Dated: 17.11.11

Tenders for the supply of following items are invited by Medical Superintendent, ESI Hospital Sector-15, Rohini, Delhi-110085 required for ESIC Dental College & Hospital, ESI Hospital Complex, Sector-15, Rohini, Delhi-110085.

**UNDER TWO BID SYSTEM**

Tender for following items is invited under TWO BID SYSTEM.

S.No.	Name of Item	Required Quantity	EMD Amount in Rupees.
1.	Table Top Digital Weighing Machine	14	17500/-
2.	Colorimeter	02	2500/-
3.	Microtome	01	22500/-
4.	Wax Bath	01	750/-
5.	Vitalograph	05	4500/-
6.	Pneumatic Chisel with Control	01	1250/-
7.	Porcelain Furnace	01	15000/-
8.	Laser Unit (Soft Dental Laser)	01	17500/-
9.	Dental Chairs and Unit	42	6,30,000/-
10	Dental Chairs and Unit (Pediatrics)	08	1,20,000/-
11	Autoclave type B	01	17500/-
12	Fumigator	01	1750/-
13	Formalin Chamber	01	600/-
14	Needle Burner with Syringe Cutter	04	300/-
15	Suction Machine	03	1350/-
16	Radiovisiography with portable IOPA)	02	47000/-
17	Hydro soldering Unit	01	7500/-
18	Pressure Molding Machine	03	45000/-
19	Poly clav (Autoclave for Ortho instruments)	01	1400/-
20	Unit Mount Scaler	03	6000/-
21	Vibrator	02	500/-

22	Digital Caliper 6" Workzone	01	120/-
23	Typodont	02	700/-
24	Pulp tester –Digital	05	7500/-
25	Plaster Dispenser	05	6250/-
26	Automatic Developer	03	5250/-
27	Magnification Loops	04	7000/-
28	Model Trimmer with Diamond disc & Carborandom Disc.	02	4500/-
29	Model Trimmer with Diamond disc .	03	4500/-
30	Lathe(Heavy Duty) .	03	12750/-
31	Lab Air Rotor.	06	3000/-
32	X-Ray Magnifier	02	800/-
33	Amalgamator	03	7500/-
34	Rubber dam Kit for PEDO	03	3000/-
35	Apex Locator & End motor	01	6500/-
36	Injectable Gutta percha with condensation	01	7500/-
37	Intra Oral camera with Laptop	01	5000/-
38	Vibrator	02	1900/-
39	Steam cleaner	01	500/-
40	Centralized Compressor system (Compressed Air System for 30 Dental Chairs and Maximum 20 operators working simultaneously)	01	1,10,000/-
41	Mobile Dental Van	01	1,15,000/-
42	Ultrasonic Cleaner	04	12000/-
43	Lab Micromotor with Heavy Duty Hand Piece	06	3000/-

### TERMS AND CONDITIONS for tender "Under Two Bid System"

1. Tender is required to be submitted in **two bids viz "Technical Bid and Financial Bid" separately** super scribing on the envelopes as **'Technical Bid' and "Financial Bid'** mentioning the serial number & name of equipment quoted and name & address of tenderer on each envelope. **Each and every page of the quotation is to be serially numbered and duly signed by Authorized Bidder/Signatory. Both the envelopes are to be put in a single envelope superscribe "Tender for (Serial No. & Name of the equipment) and name of the bidder and specifying the number of sealed envelopes enclosed/inserted.**

**(A) Technical bid:- This should include following :**

1. EMD (to be furnished in accordance with the instructions at serial No.C (2).
2. Technical details of the quoted model of equipment with reference to tender specifications.
3. Catalogue/literature mentioning Make and Model of the Equipment offered duly signed & stamped by Authorized Signatory.

**4. Warranty/Guarantee period.**

**5. Undertaking for providing AMC/CMC for 5 years or as mentioned in specifications after expiry of Warranty/guarantee period with rates to be given in financial bid along with rates of spare parts for AMC.**

**6. Statement of deviations (parameter-wise) from tender technical specifications and commercial condition, if any.**

**7. Authority letter from manufacturer in case bid is submitted by authorized agent (As per annexure III). Authorisation should be original (not photocopy) from the principle firm.**

**8. Name of User where the quoted equipment installed in Govt. Hospital/Institution.**

**9. Tender Document in complete should be serially numbered.**

**10. Each and every page of Tender Document in complete should bear signature by Authorized Signatory.**

**(B) Financial Bid:- It should comprise of following:-**

1. The information given in Technical bid at A(2) should be reproduced with prices indicated. Any deviation in this regard will render the bid liable for rejection. The prices should be all inclusive lump sum prices as per description given in sl. no. 2 below. The price of AMC/CMC for 5 years after expiry of warranty/guarantee period should be given in financial bid only. Guarantee should be provided from original manufacturer for equipments & accessories. The tender will not be considered without offer of AMC / CMC. In case of CMC (comprehensive maintenance contract) the rates should be quoted inclusive of spares. CMC should clearly define rate for five years & parts covered under CMC. Only technical bid (unpriced) shall be opened first and shall be referred for the technical evaluation. The financial bid of only those bidders whose technical bid is found acceptable by the technical evaluation committee will be opened by purchase committee for further action.

2. Rate should be quoted as lump sum price F.O.R. destination in Indian Rupees inclusive of cost of the equipment, freight, insurance, transit insurance, packaging, forwarding, sales tax, excise duty, octroi etc as well as charges for installation and commissioning with all the men and material required for the same. All inclusive lump sum prices need to be accompanied by a statement indicating a clear 'break up' of lump sum price in its various components constituting it along with values/amount indicating against each of such component adding to arrive at all inclusive lump sum price. No other charges in addition will be payable on any account over and above the lump sum price quoted. Price variation clause will not be acceptable. The rates quoted in ambiguous terms such as "freight on actual basis" or "taxes as applicable extra" or packaging forwarding extra will render the bid liable for rejection irrespective of its gradation in respect of lump sum prices quoted. Bidders in their own interest shall ascertain the eligibility of whatsoever concession and exemption eligibility applicable to the Hospital and shall advise the purchaser and quote accordingly.

**(C) Others Terms & Conditions**

1. Tender should be typed in words as well as in figures free from erasing and error in typing. The bidder must attest any erasing/error otherwise the rates in reference of that particular item shall not be considered. The bidder along with seal of the firm must sign each page of the tender. The covering letter should indicate the list of enclosures.

2. **EMD:** shall be deposited by the bidder by enclosing **Demand Draft or Bankers Cheque only** in favour of **'ESI Fund A/C No.1, ESI Hospital, Rohini, Delhi -85** along with Technical bid which shall be refunded to bidders without any interest after finalization of tender.

3. **Security Deposit:** equivalent to 10% of the total cost of the equipment shall have to be deposited by the successful tenderer through Demand Draft/Bankers Cheque in favour of **ESI Fund A/C No. 1, ESI hospital, Rohini, Delhi-85** or Fixed deposit only in favour of Medical Superintendent, ESI Hospital Rohini, Delhi-85 on demand. The same shall be released after fulfillment of all contractual obligations and no interest shall be payable thereof.

**4. Supply:** shall be made by successful tenderer within 6 weeks from the date of placement of supply order.

**5. Working Demonstration:** shall be provided in the Hospital or in certain cases in Delhi/NCR/Dental College to Technical Evaluation Committee within stipulated time frame as and when asked for & only two chances for demonstration will be given.

**6.** Tenders from the **manufacturer or authorized distributor/stockiest** of the manufacturer whose item is being quoted would be considered but guarantee certificate is to be provided from original manufacturer for equipments & accessories.

**7. Name, Designation and Specimen signature** of the person/representative authorized by the competent authority of the firm to deal with the tender/sign the tender document must be enclosed along with the tender.

**8. (a)** Tenderer must provide Delhi address, if any, along with the telephone no. and fax no. and mobile number/email address of authorized signatory with tender for all correspondence.

**(b)**The firm should also provide the complete address along with telephone and fax no. /email address of service station from where after sale service would be provided.

**9. The offer** -should be valid for 1 year from the date of opening of the tender.

**10. Guarantee/warranty** - The equipment & spares should be guaranteed/warranted from original manufacturer for minimum period of 1 year or as mentioned in specifications from the date of satisfactory installation.

**11. (a)** The tenderer shall enclose an undertaking by the manufacturer of the equipment for servicing the equipment and supply of spare parts whenever required at least for 5 years after completion of warranty/guarantee..

**(b)** The firm should ensure to keep the equipment in working order throughout the year.

**(c)** In event of equipment covered under CMC/AMC going out of order the fault shall have to be attended to within 24 hours of lodging the complaint. In case the equipment is not restored in functional order within a reasonable time without acceptable reasons a penalty of 0.5% of total cost of AMC/CMC of the equipment per day for the period of equipment remaining out of order will be levied during AMC/CMC.

**(d)**If the equipment needs calibration, the firm shall be responsible for calibration as a part of AMC/CMC

**(e)** During the warranty/guarantee period in event of equipment remaining out of order for a period 24 hrs.of lodging the complaint without any acceptable reasons penalty to extent of 0.25% of the purchase value of the equipment shall be levied for each day of the equipment remaining non functional beyond permissible limit.

**(f)** Installation of equipment should be done within two weeks of delivery failing which penalty @ 2% of basic cost of equipment per day of delay shall be levied.

**12. For spares** – Along with rates of AMC/CMC a list of commonly used spares with price as on date be also enclosed in financial bid.

**13. One agent** cannot represent two manufacturers or quote on their behalf in a particular tender for particular item.

**14.** Any other miscellaneous items required for equipment may also be quoted in financial bid.

**15. A certificate from principal that –**

**(a)** Regarding AMC/CMC spares from original manufacturer and any other miscellaneous items (As applicable) of the equipment quoted will be made freely available for at least 5 years after expiry of warranty/guarantee period (As per annexure II). “To be made part of technical bid”.

(b) Information regarding appointment of new agent in case a change of agent shall be furnished immediately (As per Annexure III)

(c) A certificate about satisfactory performance of the equipment duly authenticated by other existing users of the equipment.

**16. Tenderer has to submit a signed undertaking on stamp paper of Rs.100/- (one hundred only) along with tender as per enclosed Annexure-II "To be made part of technical bid".**

**17. Tenderer has to submit manufacturer's authorization certificate on letter head as per annexure III in case bid is submitted by authorized agents ".To be made part of technical bid."**

**18.** Payment shall be released after satisfactory installation of the equipment.

**19.** In the event of non supply of equipment ordered the earnest money deposit shall be forfeited.

**20.** Equipment must support interface/integration for the data transfer from equipment to third party Hospital Management application, if applicable.

**21. The rates should be quoted in rupees only & should not be higher than quoted in any other organization/institution (Certificate may be enclosed)**

**22.** Equipment manufacturers must provide Technical documents explaining the pre-requisites, data exchange format and detailed user and technical manuals explaining how to integrate and transfer data with third party Hospital Management application.

**23.** Equipment manufacturers must also provide the needed hardware drivers and technical support to integrate the equipments with third party Hospital Management application.

**24. Medical Superintendent reserves the right to reject/accept any or all tenders without assigning any reason thereof and also has right to place order on one or more firms. No Correspondence will be entertained in this regard.**

**Medical Superintendent**

## Annexure I

### CHECK LIST

The bidder should ensure that the following information/documents are enclosed along with the bidding documents (Technical Bid).

- (I) EMD (As per the Terms & Condition) Yes/No
- (II) Bid-Form and price schedule as given in Terms and conditions Yes/No.
- (III) Five years AMC/CMC from original manufacturer and charges as given in Terms & conditions Yes/No
- (IV) Rate certificate indicating that they have not supplied the said equipment to any individual, Govt. or private institution at the rate lower than the quoted rate. Yes/No
- (V) Manufacturer's Authorization Certificate (As per Annexure III) in case Bid is submitted by Agents. Yes/No
- (VI) User's list along with the Certificates about SATISFACTORY PERFORMANCE REPORT OF THE EQUIPMENT AND QUALITY OF AFTER SALE SERVICE duly authenticated from existing users of the quoted model of equipment. A list of the users of quoted model, indicating the complete postal address of the users and date of supply of the equipment is also endorsed. Yes/No
- (VII) Authorization Certificate from the Principal/manufacturer that they will be solely responsible for maintenance of equipment during guarantee/warranty and AMC/CMC period even when the Agent is changed during this period (As per Annexure- III) Yes/No
- (VIII) Authorization certificate from principal that spares and any other miscellaneous items (As applicable) of the equipment quoted will be freely available for at least five years after expiry of warranty/guarantee period (As per annexure III) Yes/No
- (IX) Tenderer has to submit a signed undertaking on stamped paper of Rs.100/- (Rupees One hundred only) along with tender (As per Annexure II) Yes/No
- (X) For the equipments where consumables/reusable etc are required a list indicating cost and life of consumables be given. Yes/No

**Signature of Authorized Signatory of the Firm with full name & stamp**



## Annexure-II

### UNDERTAKING

Date of Opening:

Item No.

Name of Item

To,

Medical Superintendent,  
ESI Hospital, Sec-15, Rohini,  
Delhi-110085

Respected Sir,

1. The undersigned certifies that I have gone through the terms and conditions mentioned in the tender document including annexure and undertake to comply with them. The rates quoted by me/us are valid and binding on me/us for acceptance for the period of one year from date of Opening of tender.

2. It is certified that rate quoted are the lowest quoted for any institution/Hospital in India.

3. Earnest money deposited by me/us viz Rs. \_\_\_\_\_ in the form Demand Draft/Banker's Cheque in favour of ESI Fund Account No.1 New Delhi is attached herewith and shall remain in custody of the Medical Superintendent,. ESI Hospital, Rohini, Delhi as per SI No 3 of terms and conditions.(Deposit EMD separately as prescribed for TWO BID SYSTEM).

4. (A) I/We give the rights to Medical Superintendent, ESI Hospital, Rohini, Delhi to forfeit the Earnest Money deposited by me/us if any delay occur on my/agent's part or fails to supply the article at the appointed place and time and of the desired specification.

(B) I/we undertake that I/we will be in position to provide Annual Maintenance Contract/Comprehensive Maintenance Contract (AMC/CMC) , Spare Parts, and consumables for five years after completion of guarantee/warranty period .I/we also undertake to keep the equipment in functioning state throughout the year and in case of equipment going out of order, the fault will be attended within 24 hours of lodging the complaint failing which, a penalty of 0.5% of the total cost of the AMC/CMC of the equipment per day for the period equipment remains out of order be levied on me/us. During Guarantee/Warranty period in event of equipment remaining out of order for a period exceeding 24 hrs. of lodging the complaint without any acceptable reasons, penalty to extent of 0.25% of the purchase value of the equipment be levied on me/us for each day of the equipment remaining non functional beyond permissible limit.

5. There is no vigilance/CBI case or court case pending against the firm/supplier.

6. On Inspection if any article is found not as per supply order, it shall be replaced by me/us in time as asked for, to prevent any inconvenience at my /our own expenses.

7. I/we hereby undertake to supply the items as per directions given in supply order within the stipulated period.

8. I/we undertake to provide guarantee/warranty as mentioned in specifications from the date of satisfactory installation and inspection. I also undertake that I will maintain the equipment during this period and replace the defective parts free of cost, if necessary.

9. I/we understand that Medical Superintendent, ESI Hospital, Rohini, has the right to accept or reject any or all the tenders without assigning any reasons (s) thereof.

**Signature of Authorized Signatory of the Firm with full name & stamp**

**Annexure-III**

**AUTHORIZATION CERTIFICATE**

To,

The Medical Superintendent,  
ESI Hospital, Sec-15, Rohini,  
Delhi-110085

Sir,

Authority letter against

Tender No. -----due on -----item quoted-----

-----  
-----We,-----, who are established and reputed manufacturers of-----  
-----having factory at-----and hereby authorize M/s-----  
------(Name and address of agent) to bid, negotiate and  
conclude the contract with your institution against above tender for the above goods manufactured by  
us.

We hereby extend our full guarantee/warranty as per the various Clause of the Terms & Conditions of tender for the goods offered for supply against this invitation of bid from the above firm. We also confirm that the spares and any other miscellaneous items (As applicable) of the equipment quoted will be freely available for at least five years after expiry of warranty/guarantee period.

Our other responsibilities include:

1. Information regarding the name of new agent, in case of change of agent
2. -----(Here specify in detail manufacturer's responsibilities)

The services to be rendered by M/s-----are as under

1. -----

2. -----

(Here specify the services to be rendered by the agent)

Yours faithfully,

**(Signature & Name of manufacturer)**

**With address and seal.**

**Note: This letter of authorization should be on the letter head of the manufacturing concern and should be signed by a person competent and having the authorization to issue said certificate on behalf of the manufacturing firm. The said certificate should also bear the signature of participating bidder as a witness.**

## **TENDER SPECIFICATIONS OF EQUIPMENTS.**

### **Specifications of (S.No.1) Table Top Digital Weighing Machine**

#### Specifications

##### Table top Digital Weighing balance

- Precision – 0.001 g to 200 g
- Stainless steel Pan with Pan size atleast 10 cm
- Along with Cabinet angle
- Front loading
- Large LED or LCD display
- Battery/ Adapter operated
- Low battery indication
- Rechargeable battery
- Autocalibration facility with standard weight (Atleast 1 standard weight to be provided)
- Plug should be compatible with Indian Switch
- Warranty – 5 years.
- Guidelines for five years Annual Maintenance Contract(AMC) thereafter.

Source: Indigenous / Imported.

### **SPECIFICATIONS OF (S.No.2) COLORIMETER**

- Photoelectric colorimeter with 5 optical Filters.
- Display showing optical density and % transmission on micro ammeter
- Switches to set wavelength , optical density and % transmission.
- Sample Size : 1 ML.
- Round Cuvette.
- Wavelength : 400-700 nm with wavelength reproducibility +-5nm.
- Absorbance (OD):0-1.999.
- Transmission : 0-100%.
- Filters : High Standard glass filters.
- Filter case
- Resolution :0.1
- Minimum Volume :1 ml
- Light Source : 6V, 10W Tungsten filament lamp.
- Detector : High Sensitive Photo.
- Power requirement: 6VDC or220V AC.
- Ambient Temperature: 10 degree C to 45 degree C.
- Operator Manual: 1 copy.

Warranty: Minimum 2 years.

Guidelines for five years Annual Maintenance Contract (AMC) thereafter.

Source: Indigenous/Imported.

## SPECIFICATIONS FOR (S.No.3) Microtome.

### SEMI AUTOMATIC ROTARY MICROTOME

- Automated specimen advance & motorized cutting
- Total specimen advance : 35mm
- Cutting Stroke : 65mm
- Maximum advance speed: 2400 um/sec.
- Section Thickness range : 0.5-100 um
- Trim thickness range : 2-100 um
- Retraction range : 0-125um
- Section Counter
- Distance display
- Knife angle position locator
- Specimen orientation light
- Cassette organizer tray
- Emergency stop button
- Knife locking pin to secure the blade holder to the fixed knife stage.
- Auto load facility to automatically reset the specimen head to a ready position.
- Three cutting modes along with continues cutting
- Facility for the return stroke to be faster than the optimized cut stroke to maximize the throughput.
- High Profile Disposable Blade Holder.
- Low Profile Disposable Blade Holder.
- Solid Knife Holder.
- Tungsten Carbide Tip Blade Length 160mm.
- High profile disposable Blades HP-35.
- Low profile disposable blades MB-35.

Source: Indigenous / Imported.

### **Specifications for (S. No.4)Wax Bath:**

- Anodized black interior, white aluminum exterior, with black metal lid durable and easy to clean.
  - Capacity: 5 liters with a dispensing tap.
  - Built in temperature controller providing temperature control from ambient to 75 degrees.
  - Non drip swivel lever with replaceable filter making dispensing wax easy.
  - Clear light indicating power on, tap light on, bath heater on with fail safe mechanism.
  - Tap heater must maintain wax molten.
- Source: Indigenous / Imported.

### **Specifications of (S.No.5)Vitalograph.**

- 6 litre capacity.
- S.S. chamber with chain.
- compensated counter balance to float.
- Pulley calibrated to denote volume.
- Inlet and outlet tubes complete with corrugated rubber tubing's.
- Mouth piece with recording lever.
- Extra mouth Pieces X 15 in numbers.
- Warranty for two years.
- Guidelines for five years Annual Maintenance Contract (AMC).

Source: Indigenous / Imported.

### **Specifications of (S.No.6) PNEUMATIC CHISEL.**

STAINLESS STEEL BODY WITH AUTOMATIC OIL FEEDER & PROVISION OF CONTROLLING INCISION POWER BY HANDPIECE

- AIR PRESSURE MAXIMUM UP TO 5/6 Bar
- AIR CONSUPTION 40 TO 50 lt/min
- NOISE LEVEL SHOULD NOT EXCEED 78 Db(A)

Source: Indigenous / Imported.

## **SPECIFICATIONS OF (S. No.7) PORCELAIN FURNACE**

Compatible with all materials in dental ceramic restorations

Should allow vacuum and atmospheric firing

Should be compatible for furnace soldering of ceramic work and For pressing

Should be compatible or special programmed as crystal firing

Should have Automatic temperature adjustment and cleaning function

Should have

- Power failure protection and night mode

- Vacuum settings

- Lift monitoring and lift speed

Fast cooling to stand by temp

Firing chamber with minimum of diameter 90mm and height 55mm

Should reach Max firing temp 1200\*c

- Compatible with safety guidelines (Protection class 1)

- Accessories to be included:

- 3 firing muffles with tweezers, firing support, working instructions manual.

- Control pad

- LED display

- Vacuum pump in sound damping box

- Warranty for five years.

- Certificate of Guarantee from original manufacturer.

**Source: Indigenous / Imported.**

**SPECIFICATIONS OF (S. No.8) SOFT DENTAL LASER (Required for Periodontics Department)**

**DIODE LASER**– for soft tissue consists of :

- Suitcase – 1 no
- Foot switch – 1 no
- Protective glasses – 3 no
- Hand pieces – 1 no

**STANDARD ACCESSORIES:**

- Optical fiber 200pm – 1 no
- Optical fiber 300pm – 1 no
- Box hand piece disposable curved tip – 1 no
- Fiber skinner – 1 no
- Diamond point pen fiber cutter – 1 no
- Power supply cable – 1 no
- Hand piece for tweezers – 2 no
- Laser danger sticker – 2 no
- User manual – 1 no
- Hand piece for bleaching – 1 no

**Source: Indigenous / Imported.**

## **SPECIFICATION OF(S. No.9) DENTAL CHAIR AND UNIT**

Motorized programmable dental chair having ergonomic seamless soft upholstery.

### **DENTAL CHAIR**

- Should have following programmes:-
  - (a) Auto Return to Zero position.
  - (b) Should have two preset & two user- selectable programmes.
- Should have chair instrument lock for safe operation.
- Should have articulated headrest with seesaw movement suitable for pediatric patient.
- Dental Light should have variable intensities of lux from 5000 to 40,000. It should be LED reflected light with antiglare protection shield.
- Single multi-functional foot control for all chair movements & dental light operation to avoid cross – contamination.
- All inlet & outlet water pipes, electrical cables & compressed air pipe should be concealed within the unit for esthetic & hygiene reason.
- Should be provided with Doctor's stool (with up & down movement facility) & with adjustable backrest tilt. The range of up and down movement should be at least 1 feet.
- It Should have operating Voltage 220 V to 250 V (specially designed for Indian condition).
- It Should have Maximum Height 90 to 100 cm & Minimum Height up to 40-45cm.
- Should be CE/FDA approved.

### **DENTIST ELEMENT**

- Over head delivery system, consisting of
  - (a) 3 way syringe
  - (b) 4 – hole hand piece hose for air turbine , air motor, scaler & light cure.
- Module system with brushless micro motor with contra – angle hand piece, Two airtor hand pieces (one super torque and One mini head hand pieces ) All the handpieces should have guarantee of minimum one year and from original manufacturer. (Hand pieces should be 93/42/EEC standard)
- Should have ultra sonic scaler with minimum five tips.
- Should have infection control system (Bios stem) with Non Retraction Valves.
- Should have air- pressure meter.
- Should have Instrument tray of at least 50cm X 30 cm

### **ASSISTANT ELEMENT**

- Assistant element should be fitted with three – way syringe, high volume suction & saliva ejector.

### **WATER UNIT**

- Spittoon should be ceramic to maintain the hygiene.
- Automatic water swiveling in spittoon & tumbler filler.
- Should be provided with air – water separator.
- Should be compatible with central compressor
- Should be provided with suction compatible with central suction (without inbuilt motor).

**Source: Indigenous / Imported.**



## **SPECIFICATION OF (S. No.10) PEDIATRIC DENTAL CHAIR AND UNIT.**

- It should be electrically operated designer complete dental chair for pediatric patient.
- It should be programmable having ergonomic seamless soft upholstery.
- It should have either overhanging or underhanging delivery unit with 5 point.
- It should be provided with
  - One mini head airtor handpiece
  - Micromotor with contra-angle handpieces
  - All the handpieces should have guarantee of minimum one year and from original manufacturer
  - One light cure unit
  - Two 3-way syringe, one on dentist side and another on assistant side
- Should have two memory programmes
- Should have articulated headrest with seesaw movement suitable for pediatric patient.
- Dental Light should have imported glass reflector with low & high intensity.
- Both hand & foot chair operations.
- It should have attached TV with pen derive for cartoon.
- All inlet & outlet water pipes, electrical cables & compressed air pipe should be concealed within the unit for esthetic & hygiene reason.
- It should have manual control for spittoon, tumbler water flow.
- Should be provided with Doctor's stool (with up & down movement facility) & with adjustable backrest tilt. The range of up and down movement should be 1 feet.
- It should have operating Voltage 220 V to 250 V (specially designed for Indian condition).
- It should have Minimum Height suitable for pediatric patients.
- Should have infection control system (Biosystem) with Non Retraction Valves.
- Should have air- pressure meter.
- Should have large Instrument tray (preferably at least 45 cm x 30 cm)
- Assistant element should be fitted with three – way syringe, high & low volume suction
- Should be compatible with central compressor
- Should be provided with suction compatible with central suction.

**Source: Indigenous / Imported.**

## **Specifications of (S. No.11) Autoclave (Class B Type) .(Required for Oral & Maxillofacial Department)**

- Table Top class 'B' Autoclave for hollow and porous products
- Should have 17-22 liters tank capacity
- Temperature range 121-134
- Should be fully microprocessor controlled with wide screen LCD display
- Should have electro-mechanical system with triple protection lock
- Should have push-button control system to operate
- Should have steam generator and top performance dual head vacuum pump in combination with hydraulic circuit to allow extremely short fast cycles and remarkable water saving.
- Should have high penetration fractionated vacuum system to ensure the complete removal of air.
- Should have customized vacuum drying facility
- Autoclave should go into standby mode on the completion of last cycle
- It also should have automatic shutdown facility.
- System should have integrated safety features and Process Evaluation System.
- Should have B universal 134, B Prion 134 and Universal 121, all cycles provide Pre & Post vacuum phases..
- Should have provision to update the software.
- It should also be possible to integrate thermal printer at later stage.
- Should be supplied with:
  - Tray holder
  - 3 trays
  - Tray remover
  - Integrated water filling & draining tank
  - One Pen Drive USB
- Should be 2004/93/42/108/EEC, EN 13060, EN 61060-1, EN 61060-2-040, CE & FDA approved.

**Source: Indigenous / Imported.**

## **Specifications of (S. No.12) Fumigator:**

- It Should Generate Ultrafine And Not Wetting Aerosols (Submicron Size)
- Large Aerosol Volume To Ensure Quick And Uniform Coverage In Large Spaces Upto 15000 Cu. Ft Or More
- Nozzle Assembly-Non Clogging Design- Stainless Steel Needle / Non Reactive Plastics.
- Solution Tank Assembly- Not Less Than 5 Liter Stainless Steel(Autoclavable) , Leak proof With Graduation Markings
- Solution Tank Cover should be stainless Steel(Autoclavable)
- Motor Housing Should Be Electric Shockproof, Unbreakable.
- Machine Weight should be not more than 5-7 Kgs
- Compatible With All Leading Disinfectant/ Fumigant Solutions
- CE/ISI marked
- Silicon Tubing should comply to FDA
- It should have automatic timer (optional)

**Source: Indigenous / Imported.**

### **Specifications of (S. No.13) Formalin chamber:**

- Lightweight transparent and corrosion proof
- Not less than 25”x 12”x12” in dimensions
- Made of plastic with three trays
- Handle on top for easy handling
- Door on the side for closing.
- Lock on the front near the door

**Source: Indigenous / Imported.**

### **Specifications of (S. No.14) NEEDLE BURNER WITH SYRINGE CUTTER**

#### Technical Specifications

- Two in one electrical and manual
- Powder coated moulded body device
- To be used both for syringes and needles
- Portable
- Needle destruction above 900 °C
- Dual movable electrodes.
- Container for Safe disposal of needles and syringes.
- Sharp stainless steel scissors.
- Safe and shock proof.
- Maintenance free
- Provision for removable collection tray or box for refused needle and syringe barrel nozzles
- Safety fuse
- Power supply 220 V
- Make: Indigenous/ Imported

**Source: Indigenous / Imported.**

### **Specifications of (S. No.15) Suction machine:**

- Sturdy and corrosion resistant
- Moves on quality castor wheels
- Heavy duty motor with high suction capacity( 5AMP, 50 WATT, 220-250 V, 0.5 HP)
- Oil immersed rotary vane pump
- Two wide mouth jars of not less than 1.5 litre capacity
- Non collapsible PVC tubes
- Indicator lamp, on- off switch, vacuum gauge, vacuum control
- Overflow cut off device
- Synthetic airtight rubber lids
- Noiseless operation

**Source: Indigenous / Imported.**

## Specifications of (S. No.16) RVG with portable IOPA

- Technology should be cordless, intraoral image plate scanner system with the photon collecting system (PCS) technology.
- Image plates should be flexible & thin of size zero, one, two, three & four (for occlusal imaging) with 100% active area.
- Theoretical Resolution should be 40 LP/mm and practical resolution should be 22LP/mm
- Gray scale should be 14 bits or above.
- Software should have the capabilities to show captured image in fine endo, perio & noise reduction mode.
- Accessories
- Image plate holders for all sizes.
- Plastic sleeves for plates for all sizes and additional 5000 sleeves for size 2
- Disinfectant for disinfection of sensor plates.
- Computer specifications (CPU with desktop) for RVG installation
- Processor Intel Core i3 (2.13 GHz or more)
- Operating system: window 7 – 64 Bits
- Software package: Office 2007 – full version
- Acrobat Reader 9.0
- HDD 320 GB or more
- RAM memory 3GB or above
- CD ROM/ DVD: 52X (CD-R derive recommended)
- Port USB 2.0 (minimum 3 ports)
- Monitor TFT or LCD 15”/ 17” SVGA 1024x 768 pixel true color at over 70 Hz. It should have provision for attachment to the chair side.
- Display adaptor : 64 – bit accelerated with at least 16 MB of video memory.
- Graphic card : ATI Radeon or NVIDIA
- The system should be provided with compatible voltage stabilizer and UPS back up.

### Specifications of IOP X-Ray Machine with Mobile Stand.

Classification	Electromedical equipment, Class 1 type B
Supply voltage	230V~ - monophase 50/60Hz
Power absorption	230V: 1.4kVA
Resistance of the line	0.5 $\Omega$
High voltage	60-70kV
Anode current	4-8mA
Focal spot	0.7mm
Total filtration	Equivalent to 2mm Al at 70kV
Tube inherent filtration	Equivalent to 0.8mm Al at 70kV
Leakage radiation	Less than 0.25mGy/hour maximum at a distance of 1m from focal spot
Long cone	Focus to cylinder tip distance = 31cm (12”)
Timer	Exposure time can be set from 0.02 to 3.2 seconds

- Radiography generator can be used both for conventional and digital intra-oral dental x-ray.
- It should have High frequency and constant potential which enables concentrated and very high-density radiation emission, whatever the conditions of use.
- The choice of voltage should be (60 or 70kV) and intensity (4 or 8mA).
- Should have extremely short exposure times (minimum 0.02 sec.) suitable for digital radiology with CCD, CMOS or phosphor plate sensors
- The generator is compatible with all digital imaging systems.
- The timer can control up to two DC generators.
- Microprocessor-controlled exposure time can be customised and programmed.
- The control software should automatically compensate for variations in mains voltage.
- The control panel manages exposure times that are perfectly suited to digital imaging from 0.02 to 3.2 sec. in 23 stages.
- SHOULD MEET AERB ( ATOMIC EMISSION REGULATORY BOARD ) STANDARD.

**Source: Indigenous / Imported.**

### **Specifications of (S. No.17) Hydrosoldering Unit**

1. Soldering and welding unit complete with 1 soldering torch with fine adjusting valve
2. 1 burner suspending angle
3. 2 filling level floater
4. 1 cleaning syringe
5. 1 flux
6. 1 burner stand
7. 4 burner nozzles assorted
8. 2 funnels and 1 filling electrolyte
9. Should meet safety regulations and version in accordance with German standard DIN- 32508 and rules for preventing accident
10. 230 V/ 50 Hz
11. Gas capacity 100 l/h
12. Max. nozzle size 18G
13. Generator filling quantity 0.8 l electrolyte

**Source: Indigenous / Imported.**

### **Specifications of (S. No.18) Pressure Moulding Machine**

1. Thermostatic heating technology with Programmable heating times
2. Working temperature of 200° C which can be attained within 1 second
3. Working pressure having a range from 0.5 to 6 bar
4. Acoustic and optical control of heating and cooling times
5. Ergonomic pellet container for controlled embedding
6. Dimensions (w x d x h): 460 x 250 x 260 mm
7. Fully Automatic
8. Weight should not be more than 16 kgs
9. 230 Volts & 850 Watts
10. Accessories –Starter kit
11. Should meet safety guidelines
12. Minimum 3 years warranty and guidelines for AMC thereafter

**Source: Indigenous / Imported.**

### **Specifications of (S. No.19) Polyclav (Polymerisation pressure vessel for the orthocryl technique)**

1. Inbuilt safety valve
2. Maximum capacity upto 4 litres
3. Accessories:
  - Heating plate – water temperature thermostatically controlled at 43°C
  - Pressure hose
  - Tested supply valve to work at overpressure of 2.5 bar
  - Power requirements: 230V/50 Hz/ 125 W
  - Should meet safety standards

**Source: Indigenous / Imported.**

### **Specifications of (S. No.20) Unit Mount Scaler**

1. Piezoelectric vibration device
2. Vibrator frequency upto 36 KHz
3. Autoclavable handpiece with medical micronic filter with minimum of 60 micrometer pore size
4. Bar water pressure – 1 to 5 Bars
5. Power Requirements – 120-230 V, 60 Hz, 30 VA
6. Should meet safety standards as per EN ISO 13485 quality assurance system
7. Inbuilt Feedback control system with Electronics for adjusting the amplitude of the single place oscillations of the tips.

**Source: Indigenous / Imported.**

### **Specifications of (S. No.21) Vibrator**

1. Components- Vibrator Unit, Instrument tray, Switch and Vibration Control Knob
2. Digital Timer – 0.15 min
3. Capacity 3-4 Casting Cylinders
4. Removable Rubber Plate for cleaning and should be fitted with Controller for vibrational frequencies.
5. Operating Voltage- 220 V AC + 10% / 50 Hz
6. Power- 75 W
7. Vibrations obtainable in three steps – low, medium and high

**Source: Indigenous / Imported.**

### **Specifications of (S. No.22) Digital Caliper 6” Workzone.**

1. 6 inches with metric and inch display
2. Accurate upto +/- 0.001”
3. Resolution: 0.0005”
4. Button cell batteries

**Source: Indigenous / Imported.**

### **Specifications of (S. No.23) Typodont**

1. Articulator
2. Maxillary and mandibular acrylic mounting jaw bases with sockets for teeth
3. Full set of Metallic typodont teeth with stainless steel screws for attaching with base

**Source: Indigenous / Imported.**

### **SPECIFICATION OF (S. No.24) DIGITAL PULP TESTER**

- Should have gentle pulse stimulus
- Maximum stimulus 80-100
- Instrument should be able to turn itself off within 3-5 minutes after operation
- It should be battery operated

**Source: Indigenous / Imported.**

### **SPECIFICATION OF (S. No.25) PLASTER DISPENSER**

- Should have a capacity of 20-30 kgs
- Should be wall mounted
- Should have a stainless steel body
- Should have inside rubber container to prevent dispersion of dust in the environment
- Plaster should be protected from humidity and other polluting elements
- Should dispense plaster in dusty powder form
- Digital electronic timer preferred

**Source: Indigenous / Imported.**

### **Specifications of (S. No.26) Automatic X-ray film developer**

Automatic X-ray film developer for automatically developing, fixing, washing and drying of X-ray films. Time required 5 to 7 minutes for up to eight fully automatically developed films.

Suitable Film Size w/o adaptor 3 X 4 Cm, Suitable film sizes with adaptor 5.7 X 7.6 Cm, 4 X 5 Cm, 2.7 X 5.4 Cm, 2 X 3.5 Cm & 2.4 X 4 Cm

Voltage	230 V
Frequency	50 Hz
Power drawn	1,8 A
Total output	400 W
Duty rating	100 %
Process time	5 min
Bath temperature	24 °C
Dimensions	H 40 x W 63 x D 25 cm

**Source: Indigenous / Imported.**

### **SPECIFICATIONS OF (S. No.27) MAGNIFICATION LOOPS 2.5x**

- High resolution binocular loupes should give bright, color corrected crisp image with super wide at least 130 mm view and super deep view at least 180 mm.
- Should have a working distance of 340-420 mm with individual adjustment (left and right side optics) of interpupillary adjustment
- Ear temples should be moldable to take any shape of head
- Loupes should also have the option of customization

### **HEADLIGHT LED WITH PROFESSIONAL HEADBAND AND 2.5 X BINOCULAR LOUPES**

- LED should give minimum illumination of 25,000 - 40,000 Lux at a working distance of 250 mm
- Should have adjustable iris aperture with angle of adjustment
- The professional headband should have rechargeable battery with plug in transformer having life of at least 4 hours on continuous usage
- 3S LED should be supplied with 2.5X binocular loupe with working distance of 340/420 mm
- Splash projection should also be provided
- Loupes should have provision of separate pupil distance adjustment for both left and right eyes
- Should provide guidelines for AMC for next five years

**Source: Indigenous / Imported.**

### **SPECIFICATIONS OF (S. No.28) MODEL TRIMMER WITH DIAMOND DISC AND CARBORUNDUM DISC**

- Should have approximately HP 1 and 2800 RPM
- Should be ergonomically designed heavy duty, low noise, single speed, with double motor
- Should have well balanced coarse cutting wheel and fine polishing wheel to prevent vibration
- Should have auto water flow with precision water control valve
- 10” carborundum coarse cutting wheel and 10” diamond disc rough or fine
- Should provide guidelines for AMC for next five years

**Source: Indigenous / Imported.**



### **SPECIFICATIONS FOR (S. No.29) MODEL TRIMMER WITH DIAMOND DISC**

- Should have approximately HP 1 and 2800 RPM
- Should be ergonomically designed, heavy duty, low noise, single speed
- Should have diamond wheel size 10”
- Should have automatic water valve with water spray attachment and splash shield
- Should have orthodontic work table complete
- Should have foot switch
- Should have provision of both dry/ wet trimming

**Source: Indigenous / Imported.**

### **SPECIFICATIONS OF (S. No.30) HEAVY DUTY LATHE**

- Heavy duty, continuous rating, vibration free, low noise used for polishing or trimming
- Should have dual working sides
- Should be supplied with drill chuck, buffing cone and grinding stone
- Dust proof motor
- HP ½, 2800 RPM speed
- Should have flexible metal cable and its attachment
- Should be equipped with double ball bearing

**Source: Indigenous / Imported.**

### **SPECIFICATIONS OF (S. No.31) LAB AIR ROTOR**

- Air motor: 22,000-27,000 rpm, 2 holes/4 holes pneumatic controlled – can also be foot controlled
- For turbine function
- Provision of no change between hand piece and external air hand nozzle
- Air plus water spray to prevent micro cracks, impart surface quality
- Speed range: 22,000-27,000 rpm
- Spray air pressure 3-7 bar
- Air blast pressure 6 bar
- Water tank with spray water regulator
- Three functions in one hand piece- turbine, air nozzle and spray

**Source: Indigenous / Imported.**

### **SPECIFICATIONS OF (S. No.32) X-RAY MAGNIFIER**

- Should be a table top model with provision for holding the IOPA x-ray film
- Should magnify the image minimum 2.5 times
- Should have a backlight provision for image clarity and vision

**Source: Indigenous / Imported.**

### **SPECIFICATIONS OF (S. No.33) AMALGAMATOR**

- Should have a digital display and electronically controlled programme
- Should have provision for adjusting ratio of mercury and alloy powder
- Should have separate auto tight reservoir for alloy powder and mercury
- Duration of mixing 1-60 seconds
- Should provide guidelines for AMC for next five years

**Source: Indigenous / Imported.**

### **Specification of (S. No.34) Rubber Dam for PEDO.**

1. It should have autoclavable & radiolucent U-shaped plastic frame.
2. It should have set of autoclavable winged and wingless color coded clamps (9 No. each)
3. It should have It should have high quality rubber dam punch.
4. It should have high quality clamp holder.
5. Kit should comprise of dental dam stabilizing cord.
6. It should have pack of rubber dam sheets (6"x6")
7. It should have template for punching rubber dam sheet.
8. It should have dental dam napkin.

**Source: Indigenous / Imported.**

## **Specification of (S. No.35) Endo Motor & Apex Locator.**

### **Specifications of Endo Motor.**

- Unit should Consists of Charging Station, Drive Handpiece, Contra Angle Head and Rechargeable Battery, Mains Cable.
- It should be cordless.
- Medical Product Designed and Manufactured according to EU Directive 93/42/EEC
- Control LED Ring For Torque
- 4-5 Torque Levels ( 0.5 to 4 Ncm ) and Display
- Stable Speed of 300 rpm
- Button for Unit On and Torque Settings
- Rechargeable Battery Capacity Display
- Press Button Contra Angle Head
- Auto Reverse Mode
- Auto Forward Mode
- Li Ion Battery 3.7 V
- Rotational Speed of Rotary Instrument 300 rpm
- Charging Station Voltage 100-240 v ( Plus Minus 10 v )
- Frequency / Rated Current of Charging Station 50 -60 Hz / 0.08- 0.12 a
- Power of Charging Station 5 W
- Contra Angle Head is Sterilizable / Thermodisinfected
- 24 Months Warranty on Charging Station , Contra Angle Head and Drive Handpiece
- 12 Months Warranty on Rechargeable Battery

#### **Accessory:**

Two Kit containing NiTi engine derive files with screwing device variable pitch for normal and curved canals. File will be 21 mm & 25 mm.

### **Specification of apex locator**

1. It should be revolutionary digital based multifrequency apex locator.
2. It should be microprocessor controlled.
3. Calibration should not require.
4. It should have short cables deflect sensitivity from EMI's
5. It should be easy to use in dry, wet and bleeding canals.
6. It should have advanced digital technology for superior accuracy
7. It should comprise:
  - 2 File Clasp
  - 2 Lip lock
  - 2 Unit digital cables
  - 2 Apron Clip

**Source: Indigenous / Imported.**

### **Specifications of (S. No.36) \_Injectable Gutta Percha with condensation.**

1. It should be Injectable Thermoplasticized Guttapercha system
2. It should have Injection heating system for molten guttapercha filling
3. It should have light weight gun.
4. Unit should have digital display of temperature.
5. It should have touch button for increase or decrease of temperature.

**Source: Indigenous / Imported.**

### **Specifications of (S. No.37) Intra Oral Camera with laptop**

- All digital signal processing through the USB integration clear digital image which is transmitted through sensor. The sensor should be of approximate 320,000 pixels with head thickness 13mm and the complete dimensions is 217 mm x26mmx 28mm (i.e. length, width and height)
- Power 5V, 1A
- Wide focusing control range from one tooth to full with resolution 640 x 480 (VGA)
- Lens is of pinpole type of 8.0 x 5.9 mm with light of ultra high intensified brightness of 4 LED. lamps with broad field of flow . Light should be cold.
- Panorama function with consecutive image capture with offered software. Full management and analysis in convenient linkage with other digital devices.
- Anti fog lens, weight less than 50 gm and cable length be 4 meters.
- The laptop should have M processor 340 with 1.5 GHz clock speed/ 512 Kb cache/400 MHz FSB/256 MB1.5 CSVTF/40 GB/DVD + CDRW/ Touch pad/ wireless lan integrated/ modem + LAN 164 Mb shared video memory, 2.8 kg weight approximately 10 USB RJ-11/RJ-45/6 cell lithium ion battery to 4.0 hrs of battery life.

**Source: Indigenous / Imported.**

### **Specifications of (S. No.38) Vibrator:**

Should have Removable Rubber Plate for easy cleaning, fitted with controller for vibrational frequencies.  
3 steps vibrators-low, medium and high non sticky superior rubber easy to remove and clean.

**Source: Indigenous / Imported.**

### **Specifications of (S. No.39) STEAM CLEANER**

Aluminium high pressure steam cleaner.

With aluminium steam chamber safety double chamber cover.

Highly flexible hose – safety features with redundant system.

Stainless steel body sanitization furnaces.

Temperature: digitally controlled.

Must remove polishing, oils and wax assembly – 110-200 volts.

**Source: Indigenous / Imported.**

## **Specifications of (S. No.40) Centralized Compressor System.**

### **Compressed Air System for 30 Dental Chairs and Maximum 20 operators working simultaneously**

#### **Clinic Pressure Station P 6000**

**400 V, 50/60 Hz, 8.6 -10.7 kW, 22.5-25.5 A**

With 2 Aggregates, incl. Control Unit, Air Intake Bacteria Filter, 500 litre pressure tank and refrigerant dryer, elec. cyclone separator, relieve valves, 100 % duty cycle, remote control display possible. Designed for up to 30 workplaces for max 20 operators working simultaneously. voltage 400 V (3~) frequency 50 / 60 Hz output at 5 bar with 2 aggregates 1133/1280 l/min Separate Control Display (5922-520-51) for each machine room required

Dimensions compressed-air station: H 180 x W 130 x D 100 cm

Dimensions receiver/dryer station: H 210 x W 90 x D 180 cm

#### **Technical Specification:**

**Number of compressors** set of 2 compressors

**Treatment stations** at 60% sim. 50 / 60, at 100%. 20 / 30

**Voltage** V 400/3N/PE/AC

**Frequency** Hz 50-60

**Rated current** A 22.5/ 25.5

**Power consumption** KW 8.6 – 10.7 kW **Fuse** A 40

Characteristic C/D according to EN 60898

**Electrical connection** Ø mm<sup>2</sup> 6

The diameter of the power cable must take into consideration the voltage, length of cabling and the local situation.

**RPM** min 1500

**Interference according to EN 55014-1: 2003-09**

**Jamming resistance according to EN 55014-2: 2002-08**

**Protection type** IP 20

**Protection class** 1

**Sound levels** dB(A) 91 without Silencing Cabinet

**Duty cycle** %ED 100

**Net weight:** kg 535 without Silencing Cabinet

**Start-up pressure** bar 6 / 6.5 / 7

**Switch-off pressure** bar 7 / 7.5 / 8

\*Adjustable using a key-operated switch

**Safety valve** bar 10

**Tank volume** l 500

**Performance at 5 bar** l/min 1133 / 1280

**Temperature range in operation** +10 to +40 °C

(ideal +25 °C, with regard to life-cycle of compressed air station and build-up of condensation)

**Storage and Transport** -10 to +60 °C

**Relative humidity in operation** max. 70%

**Relative humidity storage and transport** max. 95% (without condensation)

**Compressed air outlet connection** G1" Internal threading

**Central air suction connection** DN 70

**Condensate connection** DN 50

**Condensation volume**

150-210cm<sup>3</sup> per condensate drain cycle, depending on temperature and relative humidity

**Required room ventilation** m<sup>3</sup>/min 30

**Dimensions P 6000** (H x W x D)

Compressed air module cm 180 x 130 x 100

With Silencing Cabinet cm 210 x 140 x 125

Tank module cm 210 x 90 x 180

**Required distance between the tank and the compressed air module** ca. 30cm

**Total required space** (Including access) cm 210 x 400 x 300

Supplier has to connect the compressor to Dental Chairs. Turn key basis.

## **SPECIFICATIONS OF (S. No.41) MOBILE DENTAL VAN.**

The technical specifications of the Mobile Dental Clinic are divided into:

1. Selection of Vehicle Chassis
2. Vehicle Fabrication Specifications
3. Dental Equipment

### **SELECTION OF VEHICLE CHASSIS:**

The length of the chassis would be between 11-14 FEET and should be registered under the Transport/Goods category. The wheel base of the chassis should be between 3700-4200mm. The fuel tank capacity should be between 100-150 Litres. The chassis should have a type approval certificate from government recognized centres like ICAT, VRD, ARAI and CIRT. The vehicle should have CNG engine abiding to Bharat/Euro IV norms of the Department of Road Transport, Govt of NCT of Delhi.

### **VEHICLE FABRICATION SPECIFICATIONS:**

#### **EXTERIOR BODY SPECIFICATIONS:**

Overall length, width and height of the Body should be in accordance to the permitted length, width and height by the Regional Transport Office of NCT of Delhi, which would be based on the Chassis Specifications.

#### **INTERIOR BODY AND FLOOR SPECIFICATIONS:**

The interior wall should be of medical grade Aluminum or Stainless steel of adequate thickness and powder coated which can be fumigated and washed. The color is in accordance to the shade finalized. The flooring should be of Seamless grade PVC non-slip with low VOC and color to be decided after approval. Vehicle should be fully air conditioned. The storage areas should allow adequate storage of material in the clinical area along with cabinets and woodwork and also in the fabricated body of the vehicle if design permits. An in built drainage system and internal fitting with leak proof PVC piping for medical grade compressor.

The cabinets should be with Plywood & laminate with Low Volatile Organic Compound (VOC) sealers & Colour based on interior furniture, along with Medical grade Mobile drawers with Silicone rollers the color of which would be decided after approval.

#### **SEATING ARRANGEMENT**

The total number of seats would be for at least 4 members excluding the driver cabin. Seats should be made of High Density Moulded Polyurethane Foam with head rest and foldable arm rest.

### **ELECTRICALSYSTEM:**

This would include adequate insulated wiring and earthing well supported with adequate voltmeter and circuit breakers. Provision for External Power Source (Shore Power), Generator, Alternating Current Supply (AC), Direct Current Supply (DC) should be made. The generator should be of 5 Kv, Diesel, 4 Cycle, Water Cooled, vibration free and noise less. The Stabilizer should have at least 5 KV capacity.

The interior lighting should be of CFL type and adequate intensity and number. The fans should be on portable and wall mount and should run on direct current. There should adequate electrical supply provision made for Split Air conditioner and its condenser along with earthing and circuit breakers. There should be provision for back up invertor and voltmeter and provision for external power supply. Adequate number of electrical points should be provided for 5 Amp and 15 Amp.

### **WATER STORAGE TANK:**

The fresh water would be stored in a tank of capacity of 100-150 L along with pump of 0.25 hp. Location of the tank as per design approved.

### **WASTE WATER SYSTEM:**

Adequate Drainage system from the dental chairs, washing areas should be identified and storage tank should be designated and of adequate capacity of at least 100 litres. There should provision for outlet of the same.

### **SPECIFICATION OF DENTAL EQUIPMENTS:**

- Compressor: at least 1-1.5 HP.
- Dental chairs:
- Number of chairs: 01 no.s
- Specifications: Electrically operated with spittoon attachment, halogen light with two intensity air ventury suction, air-rotor, micromotor, 3-way syringe, ultrasonic scaler and light cure unit, X-ray viewer instrument tray and an operating stool, one air – rotor hand piece, straight and contra angled micro-motor hand piece.
- Intra-oral X-ray machine: Portable, 70 KV, 8 mA: 01 no.s each
- TV & DVD player : 01 no.s each
- Public address system.
- Oxygen cylinder.
- Portable dental chairs: One Foldable Portable chair along with Suitcase unit with air-rotor, micro-motor, ultra sonic scaler, suction unit, light with stand and compressor along with foldable seat (0.5HP).

### **Specifications of (Item No.42) Ultrasonic Cleaner:**

- Should have Lengthened tank, Radiator fan, Strong transducer, wet- proof PCB.
- Should have 5 cycles digital timer.
- Should have three separable wires, Heater, Industry IC, Circuit protector and strong plastic housing.
- Ultrasonic frequency should be 50-55 KHz.
- Tank should be made of stainless steel.
- Minimum Tank capacity should be 4.5 Litres.
- Power supply should be AC 220-240, 50/60Hz.

**Accessories should include minimum** ¾ Finger Guard Basket,(2) Beakers,(2) Covers, (2) Positioning Rings and (2) Beaker holders.

### **SPECIFICATIONS FOR(ITEM NO.43) LAB MICROMOTOR WITH HEAVY DUTY HANDPIECE**

- Should be powerful and have stable torque.
- Hand piece should be easy to handle, lightweight and precise in function.
- Should have dust free mechanism for high durability.
- Noise should be minimal and vibrations least.
- Should not get heated after long hours of working.
- Should not have any play in the hand piece.
- Should have increased chuck strength for working on various materials.
- Speed 1000-50,000 rpm/min, variable speed control.
- Should have sufficient length.
- Should have a straight hand piece.

### **CONTROL UNIT**

- Speed 1000- 50,000/min.
- Should have Hand as well as Foot Control.
- Easy to operate display panel and user friendly design.
- Audible function check.
- Digital speed display.
- Error code display function.
- Voltage 220V to 240V.

### **HANDPIECE**

- Should have high torque.
- Should be Heavy Duty.
- Weight should not be more than 300 g.
- Minimum one year warranty on hand piece from original manufacturer.





