

Notice Inviting e-Tender

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PROCUREMENT OF DIFFERENT MEDICAL EQUIPMENT TO BE USED AT R AHMED DENTAL COLLEGE & HOSPITAL UNDER THE PROJECT IMPLIMENTATION OF HEALTH & FAMILY WELFARE DEPARTMENT.

(Submission of Bid through *online*)

Bid Reference No.: WBMSCL /NIT-110/2019	Dated -06.12.2019
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The following amendments have been made in the tender document. The changes are highlighted in yellow in the document below,

Amendment -I **Revised Technical Specifications**

Schedule-I

Dental Operating Microscope with Microscopic Co-observation system (Dept. of Conservative Dentistry and Endodontics)

1. Magnification

The system must have a 5-step magnification changer with a 6:1 ratio with Magnification factors 0.4x - 2.5x or more

The system must offer an optical magnification range from 1.4x to 25x or more with flat Achromatic Optics

The adjustment of the interpupillary distance must offer a distance from 55 mm to 75 mm with diopter setting must offer a value between + 5 and -8 dpt.

The system must offer a field of view range from 8 mm to 151 mm

2. Focusing System

Apochromatic, continuous 200- 430 mm or more working range

3. Tubes

Main Surgeon Binocular Tube should be Tilttable tube 0 to 180 degree or better

Eye piece 10x magnetic wide field eyepiece with integrated eye cups for Main Surgeon Binocular tube

Left – Right optical tube movement $\pm 25^\circ$ without changing eyepiece position.

4. Illumination

The system must offer LED illumination which includes 3 individual LEDs for RGB

Working distance of 200 mm, the system must offer a Typical light intensity of 170 KLux

The system must offer a 5,500 K cooling LED system far away from field of view for better cleaning

The system must offer a one finger activation of the True Light mode for handling composite materials in a natural light environment.

The system must offer a one finger activation of an integrated Fluorescence Mode for caries and composite detection

The system must offer a one finger activation of an integrated polarization filter

The system must offer a one finger activation of the Orange Color Mode for composite materials

5. Integrated HD Camera

The system must offer a fully integrated **medical grade** video camera for surgical microscope positioning with no additional load, no interfering lateral imbalance and no impact by external cables

The system must offer an integrated HD video camera in Full HD resolution with image capture and video recording functions **along with medical grade display monitor of 24 inch**

6. Handgrip

Strong handgrips for adjustment of total microscope along with single button operation for all the operation like illumination, filter change (Green, Yellow) and working distance.

7. Stand

Floor stand with Auto Balance or Hydraulic balancing system.

Each castor must provide a cable detector

The system must offer a 120° coupling.

8. Fluorescence

The system must offer an integrated Fluorescence Mode that supports detection of carious substances and composite filling materials

The system must offer integrated crossed polarizers that remove specular reflections and aid in color mapping and shading

The system must offer a light mode that prevents premature curing for typical composite materials for more than 60 seconds while preserving perception of color and depth

9. Stand Height & Length

Height: 1700 mm or more & Arm length: 1500mm or more

10. GUI (Graphical User Interface)

User specific start position

11. Electrical Data

Voltage : 230 V \pm 10%, Frequency : 50 Hz.

12. Side Co-observer Attachments with binocular view

13. Certification: Should have US FDA & European CE

14. Backup system: Minimum 15 mins online UPS backup should be provided.

Schedule-II

1. Er:YAG: 20W power, 150 mj energy with optic delivery-OPTOflex articulated arm.

Nd:YAG: 15W power with optical delivery-dual fibre system.

2. Coloured touch screen with adjustable tilt 80 customized settings for 40 different applications.

3. Integrated spray water system.

4. Optional wireless foot switch.

5. Provided with set of 20 specialized fibre tip for high quality endodontic, periodontic and implant recovery along with 20 specialized fibre tip for root canal sterilization utilizing photon induced photoacoustic streaming (PIPS).

6. Tipless non contact 90 degree angled Er:YAG dental handpiece with 0.9mm spot size at the focal point with air water spray & 90 degree angled Er:YAG dental handpiece with 0.9mm spot size at the focal point with air water spray, Tipless non contact handpiece for teeth whitening.

7. 300 μ m fibre-optic Nd:YAG handpiece & 200 μ m fibre-optic Nd:YAG handpiece.
8. Extra fiber cable should be provided.
9. Certification: Should have US FDA & European CE.
10. Backup system: Minimum 15 mins online UPS backup should be provided.

Schedule-III

Milling Machine (Department of Prosthodontics & Crown-Bridge)

1. Capable of unattended 5-axis milling with simple one-button operation
2. Precision milling of wax, zirconia, nano composites and PMMA blocks using fully automated 8 position disc changer unit
3. Air flow system keeps work area Integrated clean
4. Spindle rpm 6,000 to 1,00000
5. **Sintering unit:** Sintering unit capable of maintaining high temperature of around 1500 degree Celsius for not less than 5 hours or more with vacuum unit.
230 \pm 10 volts
50 Hz
6. With **CAD and CAM unit** Capable of unattended 5-axis scanning
7. Diagnostic notification system should alert users of machine status and CAM software
8. **Scanner:** Intra oral high resolution scanner with latest version of software.
9. **Digital CAD printer with software.**
10. **Suction unit:** CAD silent compact
11. **Compressor:** 2 HP air compressor, oil free, minimum 40 ltr tank.
12. **Backup system:** Minimum 15 mins online UPS backup should be provided.

Schedule-IV

Power Micro Saw Unit for Osteotomy-SET (Oral &Maxillofacial Surgery Department)

Power Micro saw unit for osteotomy-SET comprising of microdrill handpiece 1pc, motor control unit-1, foot switch-1pc, micro reciprocating saw 1pc, micro sagittal saw 1pc & micro oscillating saw 1pc

1. MICRO DRILL HAND PIECE: 1 No.

- High speed, pencil grip light weight Titanium body drill – Length 4.6-4.9 inch, diameter 19-21mm, mass 120-140 gm. Speed: Max RPM of 50,000. Accepts J-Notch or Straight Shank Burs.
- Sterilizable through Steam, ETO and Flash Autoclavable Should be supplied with Medium Straight Attachment - 1 No & Long Angled Attachment - 1 No, Short “O” Attachment - 1 no.

2. MOTOR CONTROL UNIT: 1 No.

- Touch screen display control for incorporating multifunction into system
- Interactive icons represents systems. Outputs represent in digital figures
- Supply 220-240V on 50-60 Hz. Can identify different hand pieces with display
- Must be equipped with at least 3 ports to connect 3 hand pieces, 2 ports for connecting 2 foot switches & integrated irrigation facility.

3. FOOTSWITCH: 1 No.

- Should have fully programmable footswitch
- Able to control following function via footswitch motion–Forward, Reverse Oscillation.
- Switch over to high/low speed. Increase or decrease speed.
- Can operate 2-3 hand pieces sequentially attached to the same motor control unit.

4. Micro Reciprocating Saw: 1 No.

- Should run from the same Motor Control Unit meant for the Micro Drill Should cut in a Perpendicular Line, Should have Maximum speed of 14000 cpm, Dimension: Length 165-170mm, Diameter 18-20mm, Mass 0.19-0.21Kg
- Excursion 3mm, Titanium Body ensuring light weight, Should run from the same motor control unit meant for Neuro Drill & at times can run sequentially.

5. Micro Sagittal Saw:1 No

- Should run from the same Motor Control Unit meant for the Micro Drill. Should cut in same horizontal plane, Should have Maximum speed of 25000 cpm. Dimension – length 134-136mm, diameter 19-21mm, mass 140-160 gm
- Maintenance free D.C brush-less motor, Snap-lock assembly and disassembly of all attachments, Titanium Body ensuring light weight, Sterilizable through steam, ETO and Flash.

6. Micro Oscillating Saw 1 piece

- Should cut in same horizontal plane, Should have Maximum speed of 20000 cpm. Dimension: Length – 162-164mm, Diameter – 19 – 21mm, mass – 0.180-0.185kg, Excursion – 7-8 degree arc.
- Maintenance free D.C brush-less motor, Snap-lock assembly and disassembly of all attachments, Titanium Body ensuring light weight, Sterilizable through steam, ETO and Flash

7. Compatible hand switch: 1 No

- Should be common to micro drill & micro saws. Length 150-153mm, diameter 23-23.3mm. It should have safety switch to control operation of the hand piece.

8. Connecting cord – 2 Nos

- Should be at least 10ft long, 3/8" diameter flexible electrical connecting cord. Dot-to-Dot type push-pull connectors at both ends.

9. Cutting Accessories : Qty–10 each for Micro drill, Sagittal Saw, Reciprocating saw & Oscillating Saw.

10. All products quoted should be from the same manufacturer to offer compatibility of system

11. Backup system: Minimum 15 mins online UPS backup should be provided.

12. Certification: Should have US FDA & European CE.

Schedule-V

Reconstruction Surgical Operating Microscope with Microscopic Co observation System (Periodontia Department)

1. Magnification:

- a) The system must have a 5-step magnification changer with 6:1 ratio with magnification factors 0.4x-2.5x or more.
- b) The system must offer an optical magnification range from 1.4x to 25x or more with flat Apochromatic Optics.
- c) The adjustment of the interpupillary distance must offer a distance from 55 mm to 75 mm with diopter setting must offer a value between + 5 and -8 dpt.
- d) The system must offer a field of view range from 8 mm to 151 mm

2. Focusing System: Apochromatic, continuous 200-430 mm or more working range

3. Tubes:

- a) Main Surgeon Binocular Tube should be Tilttable tube 0 to 180 degree or better
- b) Eye piece 10x magnetic wide field eyepiece with integrated eye cups for Main Surgeon Binocular tube
- c) Left-Right optical tube movement ± 25 without changing eyepiece position.

4. Illumination:

- a) The system must offer LED illumination which includes 3 individual LEDs for RGB
- b) The system must offer LED illumination with Xenon-like brightness
- c) Working distance of 200 mm, the system must offer a typical light intensity of 170 Klux
- d) The system must offer a 5,500 K cooling LED system far away from field of view for better cleaning.
- e) The system must offer a one finger activation of the True Light mode for handling composite materials in a natural light environment.
- f) The system must offer a one finger activation of an integrated Fluorescence Mode for caries and composite detection
- g) The system must offer a one finger activation of an integrated polarization filter.
- h) The system must offer a one finger activation of the Orange Color Mode for composite materials

5. Integrated HD Camera:

- a) The system must offer a fully integrated **medical grade** video camera for surgical microscope positioning with no additional load, no interfering lateral imbalance and no impact by external cables
- b) The system must offer an integrated **medical grade** HD video camera in Full HD resolution with image capture and video recording functions **along with monitor with at least 24 inch** size.

6) Handgrip: Strong handgrips for adjustment of total microscope along with single button operation for all the operation like illumination, filter change(Green, Yellow),working distance

7. Stand:

- a) Floor stand with Auto Balance or Hydraulic balancing system.
- b) Each castor must provide a cable detector.
- c) The system must offer a 120 coupling.

8) Fluorescence:

- a) The system must offer an integrated Fluorescence Mode that supports detection of carious substances and composite filling materials.
- b) The system must offer integrated crossed polarizers that remove specular reflections and aid in color mapping and shading
- c) The system must offer a light mode that prevents premature curing for typical composite materials for more than 60 seconds while preserving perception of color and depth.

9) Stand Height & Length: Height: 1700 mm or more & Arm length: 1500 mm or more.

10) GUI: User specific start position.

11) Electrical Data: Voltage 230V \pm 10%, Frequency: 50 Hz

12. Side Co-observer Attachments: **Sterio co-observation with binocular view.**

13. Certification: Should have US FDA & European CE

14. Backup system: **Minimum 15 mins online UPS backup should be provided.**

Schedule-VI

Reconstruction Surgical Operating Microscope with Microscopic Co observation System (Oral & Maxillofacial Surgery Department)

1. Reconstruction surgical operating microscope with microscopic co observation systems:

- Working distance & focusing- 215-500 mm
- Continuously variable through motorized multifocal lens that can be controlled & focused through hand & foot control switch & manual adjustment override.
- Magnification up to 18 X
- Eyepieces: 12.5 X
- Powerful LED or Xenon based illumination system controlled through hand & foot control switch & manual.
- With built in automatic zoom synchronized illumination field diameter, manual override & iris controller.
- Binocular tube tiltable upto 180 degrees with variable diapter settings.
- Suspension system with height, lateral movement adjustable floor stand, with position locking facility.
- Microscope should have automatic circuit breaker, voltage 230V \pm 10%, Frequency 50 Hz. Beam splitter: stereoscopic Beam Splitter have minimum of four ports.
- Have Stereo Co observervation attachment for assistant 360° movement of binocular with 12.5 X or more eyepiece with Diapter setting from +5D to -8D.
- Face to Face attachment, with 0-180° tiltable binocular tube with 12.5 X eyepiece with stereoscope having similar view with main surgeon Diapter setting from +5D to -8D.
- Full HD video camera display: 24 inch medical grade HD display system attached with microscope body. (No External Monitor/detachable monitor will be acceptable). Recording system with integrated HDD. Recorder should have HDMI input & output. Permit precise movement of camera & microscope in vertical & horizontal plane.
- Microscope stand should have auto balance facility.

2. Certification: Should have US FDA & European CE

3. Backup system: Minimum 15 mins online UPS backup should be provided.

Schedule-VII

Research Microscope with phase contrast (Oral & Maxillofacial Pathology)

1. Research microscope with phase contrast:

- Dark field, polarization, fluorescence, CCTV & photomicrography attachments
- Optics-ICOS system with upto 1000 X Magnification.
- Trinocular Head (Siedentop f type). Pre-adjustment 53mm to 75mm graduated inclined at 30°.
- Photo and Video attachment with Sliding 80/20, 100:0/100 beam splitter for attaching Video/Digital Camera.
- Eyepiece-Widefield eyepiece 10X High eyepoint, FN 22.24
- Nosepiece-Quintuple or higher with slot for polariser attachment.
- Stage-Double plate ceramic coated stage 191mm (W) X 128 mm (D) with rounded corners & low positioned drop down ergonomic X-Y coaxial controls
- Condenser-Universal Abbe condenser, N.A. 1.1 or higher with iris diaphragm dove tail mount suitable for darkfield, phase contrast, Polarising & Fluorescence observations
- Objectives-U Plan 4X, N.A.0.10, W.D.25.9 mm, F.N.24
Semi Apo Plan 10X, N.A.0.40, W.D.1.0mm, F.N.24
Semi Apo Plan 40X, N.A.0.82, W.D.0.15mm, F.N.24
Semi Apo Plan 100X oil, N.A.0.1.25, W.D.0.2mm, F.N.24
- Incident Illumination with automatic voltage sensing power supply/ LED
- Modular six position Fluorescence illuminator.
- To be supplied with blue, green & UV excitation Chroma filters.
- 100WHG (Mercury) HBO Lamp (2200L)
- Microphotography attachment with Image documentation system.
- 3mp for better color cooled ccd with image analysis system.
- Individual calibration for all magnification are required in a linear measurement and annotation.

- Camera from same manufacturer.
- Image sensor 1/1.8" CCD, pixel size 3.45 um x 3.45 um
- frame rate: 6 fps @ 2080x1542, 12 fps @ 1040x770)
- should have the capability to capture the fluorescence images simultaneously upto 5 filters with image merging capability.

2. Standard Accessories:

- Spare 100 WHGHBO1no.
- Standard European power cord 2 no.
- Spare fuse 3amp.
- Polyvinyl dust cover Immersion oil.
- The above microscope should be upgradable in future with motorized focus and noise piece.
- Branded computer with HDMI medical grade LED MONITOR (24") with latest version OS, CPU & other accessories to be supplied with the microscope

3. Certification: Should have US FDA & European CE for microscope and florescence system

4. Backup system: Minimum 15 mins online UPS backup should be provided.