

S. No.	Name of Stores	Number or quantity req. In metric system	Detailed Specifications
1	DENTAL CHAIR (HIGH END)	10	<p>Microprocessor controlled and fully digital and should be of solid cast aluminium and corrosion free construction. The instruments location should be interchangeable. Back rest tilting should be from 0 to 90°. The lifting capacity should not be less than 200 kgs. The seat height should be minimum 300mm to 400mm and maximum 800mm to 900mm. The headrest should be bendable and adjustable in height. It should have arm rest- removable right arm rest. It should have minimum 4 programs, The movement should be quiet and vibration free. Paint – epoxy paint finish. Upholstery should be seamless with viscoelastic foam for extra patient comfort. Seat and backrest should be such which should facilitate cleaning. Adjustable leg rest.</p> <p><u>Unit</u></p> <p>Over the patient doriot arms for five instrument locations with the facility for the following instruments.</p> <p>Fibre optic turbine (Three with coupling), Fibre optic micromotor internal spray with Straight & Contra angle hand pieces- 2 each Piezoelectric scalar with six tips Lightcure, 6 way syringe (with provision for cold water, cold spray, hot water, hot spray, air and light).</p> <p>➤ <u>Additional features</u></p> <ul style="list-style-type: none"> ❖ Spring balance instrument arm for movement and easy lock free height adjustment of console. ❖ Easy maneuverability fitted with tray, ceramic/ glass cuspidor- autoclavable with bowl rinse and cup filler mechanism. For prevention of possible backflow from unit into municipal water supply air gap device is required. ❖ Chair unit function operability from safety features should be such that the backrest should move freely upwards if obstructed. There should be a provision for automatic stop of backrest i.e. it should be touch sensitive.

		<ul style="list-style-type: none"> ❖ A touch sensitive console for dentists use which should have feasibility for individual height adjustment and should have provision for two six way syringes (for dentist and assistant side). ❖ Have integrated device to eliminate cross-contamination and additional hygienic measures like filter in suction line to trap amalgam particles. ❖ Chair position should be automatic and manual. ❖ Ceramic bearing in console arm. ❖ It should have filters for compressed air and water 20µm to 30µm with automatic water separator. ❖ It should have electrically activated valve for the modular fitting for prevention of reverse flow ❖ Dry/ Wet line suction system with high and low volume with spittoon bowl valve and rinsing unit for continuous flushing <p><u>Foot Control</u></p> <p>Foot control should have multidirectional knobs and functional lever.</p> <p><u>Operating Light</u></p> <p>LED operating light adjustable illumination from 30,000- 35,000 lux natural shadow- less without heat.</p> <p>Attachments: <u>Air Rotor Hand-piece</u>- High torque speed (rpm) 2-4 lac, fibreoptics, 3 water jets, push button type, autoclavable, titanium, antiretraction valve, 3 extra cartridge per chair and lubricant oil. <u>Micromotor</u> -High torque, Speed 100-40000 rpm, titanium micromotor with internal spray and fibreoptics, air and water spray coolants, Hand pieces: straight and contrangle, 1 No increasing 1:5 Handpiece (autoclavable). Ultrasonic scaler and fibreoptic (optional). Piezoelectric, complete with 6 inserts, autoclavable, chuck for endodontics files, Light cure unit LED/ Halogen blue visible light with air cooling, gun type, voltage regulated, programmable variable timer, protective eye shields, six way syringe,</p>
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		<p>autoclavable.</p> <p>Dental operating stools- two-one for dentist and one for assistant ergonomically designed to respond to all the techno operative needs of the dentist made up of 5 spoke support base mounted on pivoting wheels each equipped with rubber tread.</p> <p>Seat with semi automatic padding rotatable with respect to the base and height adjustable.</p> <p>Padded backrest, height and inclination adjustable with epoxy paint finish and polyurethane upholstery. Hardware. Back lighting LED for RVG. It should be unit integrated.</p> <p style="text-align: center;"><u>The additional requirements are as under:-</u></p> <ul style="list-style-type: none"> ➤ Warranty for 2 years ➤ Spare parts should be available at least for 10 years ➤ CAMC rates to be quoted for 5 years ➤ It is essential that a monthly routine check for preventive maintenance over and above the CAMC must be carried by the company/representative/distributor after the expiry of the warranty period till the time the machine is in use and functioning in the hospital. ➤ It is essential that the services of a company trained engineers are available within 24-48 hours. ➤ It should comply with the BIS/ IEC 60601/ CE certified standards for electrical safety. ➤ Supplier should give complete set of manuals with circuit diagrams of P.C. board. With trouble shooting guide. ➤ Supplier should provide on site training to staff for maintenance of the equipment training to user for its functions. ➤ Servo of appropriate rating needing ISI specifications input 140-290 V.
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<p>2</p>	<p>RVG</p>	<p>3</p>	<p>Universal sensor sizes, Technology CMOS (Complementary metal oxide semi conductor) with scintillator, High image quality, smooth and rounded edges in sensors. Sensor cable includes only 2 wires., all sensor sizes marked on the connector. One control box with LED lights for visual feedback. Ethernet or USB versions. Integration with Intra X-ray.</p> <p>Sensor type CMCS with scintillator</p> <p>Scintillator</p> <p>Material CsI</p> <p>Thickness 0.7 mm (0.028 in.)</p> <p>Size Universal which can be oriented for smaller dimensions</p> <p>Overall 39.7 x 25.05mm (1.56 x 0.99 in.)</p> <p>Active area 31.5 x 20.7mm (1.24 x 0.81 in.)</p> <p>Sensor thickness 6.4 mm (0.25 in)</p> <p>Number of pixels 1050 x 690</p> <p>View delay <5sec</p> <p>File size 1.4 MB</p> <p>Physical pixel size 15 µm</p> <p>Theoretical resolution 33 lp/mm</p> <p>Pixel size 30 µm</p> <p>Resolution >16 lp/mm</p> <p>Cable length 33.9in to 78 in.</p> <p>Control box dimensions 112 x 46x 24 mm</p> <p>Power supply in Ethernet version 48 V DC 65 mA</p>
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		<p>Power supply in USB version 5 V DC<500 mA</p> <p>Cables USB version</p> <p>From interfacebox to computer fixed 2 or 5 m (78.7 or 196.9 in.)</p> <p>Ethernet version</p> <p>From interfacebox to PoE RJ 45max. 100 m</p> <p>From PoE to LAN RJ 45max. 100 m</p> <p>Power over Ethernet (PoE)</p> <p>Power supply Single Port Injector</p> <p>Type PSA 16U-480</p> <p>Input Voltage 100-240 VAC (50-60 Hz)</p> <p>Output Voltage 48 VDC</p> <p>Max. Output current 0.35 A</p> <p>Insulation voltage primary secondary 3000 VDC</p> <p><u>Computer requirements</u></p> <p style="padding-left: 40px;"><u>Client work station with</u></p> <p style="padding-left: 40px;"><u>database server</u></p> <p>Processor 3 GHz</p> <p>RAM 2 GB</p> <p>Hard disk space 500 GB or more</p> <p>Graphics card 256 minimum memory</p> <p>Monitor Res. 1280 x 1024 (17")</p> <p>Peripherals CD-ROM drive with DVD</p>
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			<p>writer with card</p> <p>Back up medium None necessary</p> <p>Operating system Windows XP, 2003, Vista, Mac OS X, Linux Mac OS/ Linux support subject to contract</p> <p>Other Java Platform (Java Virtual Machine 1.6 or later)</p> <p>Suitable Stabilizer</p>
3	PANORAMIC and CEPHALOMETRIC X-RAY EQUIPMENT (With Digital Imaging)	1	<p><u>Main features</u></p> <p>Fully digital control, programmable, constant potential, microprocessor controlled resonance mode DC generator. Wall mounted or free standing, 3 joint selectively complaint articulated robotic arm that enables movements and versatile imaging geometries. Very high operating frequency 80-150 kHz. Maximum ripple 670 Vpp (0.4%. 84kV). Ultra short rise time, Very wide exposure parameters range, 1-16mA/54-84kV, Low patient dose. Technical factors and selected programs digitally displayed. Open positioning concept- free view to the patient from all directions, three laser positioning laser beams, easy access also for wheel chair patients. Motorized patient positioning and temple supports, automatic four blade primary collimator. Autofocus features. With compatible PC of same specification as mentioned in RVG.</p> <p><u>Selectable feature modules</u></p> <p><u>Imaging mode</u></p> <ul style="list-style-type: none"> • Basic panoramic programmes, Lateral double TMJ program, PA double TMJ program, Sinus (straight layer)

		<p>programmes</p> <ul style="list-style-type: none">• Vertical segmenting• Advanced panoramic programmes: Horizontal segmenting, Interproximal panoramic program : The beam should be parallel to the interproximal teeth angulation. No overlapping of the teeth. Orthogonal Panoramic program: The beam is orthogonal to the jaw bone that offers advantages in implantology and traumatology and in periodontal disease diagnosis. Bitewing panoramic program, lateral-PA double TMJ program, lateral multiangle TMJ program, PA multiangle TMJ program, PA non rotational sinus program, lateral non rotational sinus program, Panoramic Dynamic Exposure Control, Cephalostat Dynamic Exposure Control <p><u>Two fixed sensor system</u></p> <p>One sensor for panoramic and one sensor for cephalometric imaging both fixed sensors. Small and adjustable pixel size, high resolution imaging. Automatic Gain Control (AGC) that optimizes digital sensor sensitivity to produce excellent image quality regardless of the patients tissue and bone thinckness. Dyanamic Exposure control (DEC) adapts the whole imaging chain individually for each patient's physio-anatomical characteristics to produce the optimal contrast and density. Dental Image contrast Enhancement (DICE) that adjusts and optimizes the contrast of the image automatically and brings out image details on the entire gray scale. Fast data link of image transfer. Radiation hardened long life sensor. Connection to computer. Versatile and easy-to-use software. DICOM compatible.</p> <p><u>Digital Cephalostat</u></p> <p>Factory installed, stable construction, automatic alignment of radiation source, functionally designed and easy to use head positioner, swiveling nasal support, low absorption carbon fibre ear posts. Magnification scale appears on the image, no mechanical soft tissue filter, soft tissue filtering in imaging software.</p>
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		<p>Electrical classification Class I, type B</p> <p>Weight 113 kg (249 lbs) 130 kg (282 lbs) with cehalostat</p> <p>Chin rest level 96-178 cm</p> <p>Cephalostat ear post level 95-175 cm</p> <p>Cooling period automatically controlled</p> <p><u>Sensor specifications</u></p> <p>CCD pixel size 33 μm</p> <p>Image pixel size 66/99/130 μm (selectable)</p> <p>CCD active surface 9 x 136 mm, panoramic 9x 270 mm, cephalometric</p> <p>Resolution max. 9 lp/mm, pan 5.0-3.8 lp/mm, ceph</p> <p>Image field 14x30 cm, panoramic 24/27 x 18/30 cm, cephalometric</p> <p>Data transmission 10 MB/s</p> <p>Interface Ethernet (LAN)</p> <p>File size (uncompressed) Panoramic 4420 kB normal resolution 8770 kB enhanced resolution 17500 kB high resolution</p> <p>Pixel matrix Panoramic: 1032 x2144 pixels, normal resolution 1376 x2858 pixels,</p>
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			<p>enhanced resolution, 2064x 4288 pixels, high resolution</p> <p>Cephalostat 18x24: 1364 x 1818 pixels, normal resolution, 1818 x 2424 pixels, enhanced resolution</p> <p>Cephalostat 30 x 27: 2272 x 2045 pixels, normal resolution</p> <p>3030 x 2727 pixels, enhanced resolution</p> <p>Soft tissue filter software operated</p> <p>Scan time 2.5- 16 s, pan</p> <p>6-18 s, ceph</p> <p><u>DRY LASER PRINTER COMPATIBLE WITH DIGITAL ORTHOPANTOMOGRAM AND CEPH MACHINE (Head & Neck region)</u></p> <p>The digital X-ray printer machine should have easy operation, high film quality throughput, back up security and very clear well-defined image quality. Should have a print networking system.</p> <p>Advanced variable response (A-VR):-- Laser exposure thermal development system should be able to handle upto at least 40-50 flashes/hour with initial film output of 65 seconds with same image quality. Networking and connectable – high speed in built connection. Centralised printing. Dry laser imaging system- should utilize interpolation to magnify or reduce diagnostic images, read from modalities. Exposing the film surface to a modulating laser in accordance with the input data and should produce precise images while significantly reducing time. Cost efficiency (with no chemicals to handle and dispose)</p> <p>Advanced variable response (A-VR) Spline Interpolation. Be able to automatically detect and distinguish between image data and alphanumeric characters. Automatic Self calibration—Provision to print 24 step grayscale pattern to film and then measure its density. Bar code reader in the film drawer—which initiates auto film density correction function when a new batch of films is loaded. Smooth curve arranging – have provision for adjustment of tones to best match the diagnostic</p>
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		<p>needs of individual patients</p> <p>Recording Method Laser exposure thermal development system</p> <p>Applicable film Medical Dry Imaging, Film sizes- 8"x 10"</p> <p>Film loading Daylight film loading</p> <p>Film trays Upto 3 trays</p> <p>Processing capacity 200 sheets/ hour (8"x 10")</p> <p>Time required for first output Min. 65 sec</p> <p>Gray scale resolution 14 bits</p> <p>Pixel size 100/50 microns, which is selectable for all sizes</p> <p>Input channels One network channel</p> <p>Image memory 512 MB</p> <p>Density adjustment Automatic density correction</p> <p>Sheets 125 sheets per packet, size- 8" x 10", quantity- 2 packets + 10"x12" – 5 Packets (minimum 2 years expiry date)</p> <p>Voltage Stabilizer With appropriate rating compatible with the machine</p> <p>With roller cutter</p> <p>Other Essential requirements applicable to both PANORAMIC DIGITAL CEPHALOMETRIC X-RAY UNIT AND DRY LASER PRINTER</p> <ul style="list-style-type: none"> ➤ Warranty for 2 years ➤ Spare parts should be available at least for 10 years ➤ CAMC rates to be quoted for 5 years
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4	CERAMIC / PORCELAIN FURNACE	2	The ceramic machine should have a combination furnace which can be used for porcelain fused to metal and metal free ceramic. Equipped with a graphic monochrome display using a membrane sealed key pad. Menu navigator with graphic symbols. Standard press and firing programmes and many individual press and firing programmes. Furnace should be calibrated automatically with two temperature ranges using double range temperature calibration. Automatic crack detection system. Heating muffle technology with homogenous heat irradiation during the heating process for optimum firing and press. Compact design, should occupy small space and be easy to transport.																
5	DENTAL COMPRESSOR (Oil free)	10	<p>Oil free medical grade monobloc compressor with steel tank. Double head 2 HP/Single Head 1.5 HP mounted on High Pressure deep drawn MS tank. Fitted with: Radiator/ Powerful cooling fan/silicon Column filter for drying/ filter.</p> <p>Specification</p> <table style="width: 100%; border: none;"> <tr> <td>HP</td> <td>2 HP</td> </tr> <tr> <td>rpm</td> <td>1400</td> </tr> <tr> <td>Voltage</td> <td>230 VAC</td> </tr> <tr> <td>Ampere</td> <td>6.7 A</td> </tr> <tr> <td>dB-A</td> <td>65</td> </tr> <tr> <td>bar</td> <td>6</td> </tr> <tr> <td>free-flow Li/min</td> <td>130</td> </tr> <tr> <td>Tank capacity</td> <td>50-60 Ltrs</td> </tr> </table>	HP	2 HP	rpm	1400	Voltage	230 VAC	Ampere	6.7 A	dB-A	65	bar	6	free-flow Li/min	130	Tank capacity	50-60 Ltrs
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6	SPINDLE GRINDER	1	<p>Grinder should have variable speed upto 26000 rpm, Adjustable lamp and protection screen, Automatic spindle, Oil less maintenance free bearing, Should have provision to connect either to central</p> <p>It should have an integrated suction to collect dust. It should have easy bur changing. It should be robust spindle. It should have illuminated grinding area.</p>
7	SURGICAL MICROSCOPE	3	<ul style="list-style-type: none"> -Straight binocular head - Large field of view Standard 10x eyepieces 6-step turret magnification system LED Light source True coaxial through the lens illumination Live video and Digital Camera capable system with accessories 10x Wide Field Eyepieces with Dioptic Locks (12.5 x and 20x also available) 250mm Objective lens standard (175 mm-400 mm available) Mounting Options include: Floor, Wall, Ceiling, High Wall and Table Limited Lifetime Warranty

		<p>See how the best optics and best light make the Evolution xR6 the best choice for every operator.</p> <table border="0"> <tr> <td>Magnification Range 1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>2.3x</td> <td>3.2x</td> <td>5X</td> <td>8.2X</td> <td>12.8X</td> <td>19X</td> </tr> <tr> <td>Field of View 72mm</td> <td>50mm</td> <td>35mm</td> <td>20mm</td> <td>13mm</td> <td>9mm</td> </tr> </table> <p>0-180 degree inclinable head to rotate from 0 to 180 degrees. Adaptable cameras include DSLR, Point and Shoot, Camcorders and CCD Cameras. Angle rotation device allows the user to change the direction of the optic pad without changing the direction of the binocular head. Eyepieces come with either a 10x or 12.5x eyepieces.</p> <p>CCD Color camera- It offers a high resolution 1 chip CCD Color Camera.</p> <p>Video and Camera Adapters- It offers video and digital camera adapters to allow the addition of a digital camera for still images or a video for a live video option.</p> <p>Objective Lenses- Scopes come with a standard objective configuration of 250mm. Other objective lengths are available from 175-400mm, which are easily interchangeable.</p> <p>OR</p> <p><u>Head mounted Microscope</u></p> <p>Working distance : 300 mm to 700 mm (11.81 to 27.56 inches)</p> <p>Field of view : 30mm to 224mm (1.18 to 8.82 inches) with standard eyepieces</p>	Magnification Range 1	2	3	4	5	6	2.3x	3.2x	5X	8.2X	12.8X	19X	Field of View 72mm	50mm	35mm	20mm	13mm	9mm
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		<p>Zoom : Stepless, controlled via footswitch, standard eyepieces: 20x (2.9-7x), Interchangeable eyepieces I:14x (2.0-4.8x)(optional), interchangeable eyepieces II :26x (3.75- 9x)(optional)</p> <p>Focus : Autofocus/speed focus/manual focus.</p> <p>Individual vision correction : Widefield eyepieces for eyeglass wearers Diopter setting for individual vision correction. Integrated coaxial light shadow free illumination of the working area at every working distance. Integrated autofocus camera High-quality documentation from the user's point of view, ½ inch color CCD, PAL or NTSC, compatible with every S-VHS connector.</p> <p>Hygiene: Should be possible to disinfect all parts. Transport 2 stable aluminium cases for transfer from one place to another</p> <p><u>Medical Illumination System</u></p> <p>Metal halide light source : Maximum light efficiency, 200 W</p> <p>Colour temperature : 5500-6000 degrees Kelvin, daylight illumination</p> <p>Adjustable brightness, Optimum illumination at every working distance</p> <p>Filter : External orange filter.</p> <p><u>Data box and Footswitch</u></p> <p>Data box : Battery operated, Power supply 100-240V.</p> <p>Footswitch controls microscope functions</p>
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			<p><u>Trolley (optional)</u></p> <p>Storage microscope, Data box, Footswitch and Video System</p> <p>Monitor adapter :For mounting a flat screen with VESA 75 or VESA 100 standard</p> <p>Microscope holder: For storage</p> <p><u>Digital Video System</u></p> <p>Touch Screen User friendly operation</p> <p>High performance digital recording. Simultaneous acquisition of high-quality videos and still images, save directly to a USB stick. Networking and documentation DICOM compatibility for videos and still images, archiving in patient file.</p> <p>It should conform to :</p> <p>Medical Devices Directive 93/42/EEC</p> <p>IEC 60601-1: EN 60601-1; UL 60601-1; CAN/CSA-C22.2 NO. 601.1-M90, certified for safety</p> <p>Electromagnetic compatibility IEC 60601-1-2;EN 60601-1-2</p> <p>ISO 9001/ISO 13485 AND ISO 14001 certified for quality management.</p>
8	APEX LOCATOR	2	<p>Apex Locator</p> <p>Automatic calibrated Apex Locator that measures root canal length in dry and wet conditions with accuracy of 95-96%.</p> <p>Audible signal and meter for indicating the position of the apical constriction. For high accuracy in detection of file</p>

8	ENDOMOTOR	<p>location, the instrument should use a ratio technique. A LCD screen, information display, canal length indicator bars, sound volume (off, low, high), battery power indicator, meter bar (for the ratio technique), adjustable apical line.</p> <p>Rating: DC 4.5 V, Power Consumption: 0.135 VA, Size : W 105x D 105x H 115mm</p> <p>Weight : 370 gms approx</p> <p><u>Endomotor</u> Motor handpiece and contra angle (mini contra head with reduction :20:1) should have a diameter of 11 to 12.5 mm, weight 60-70 gms approx, length 160-165 mm. It should be light weight for easy endodontic access and design to minimize fatigue and fingertip stress. Five automatic safety features – foot start/ stop, torque reverse, torque slow down, apical reverse, apical slowdown. Foot switch for easy operation to use the micromotor/endomotor for root canal preparation. Endomotor Flexibility of eight speed settings from 100-600 rpm, tubing for micromotor.</p>
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