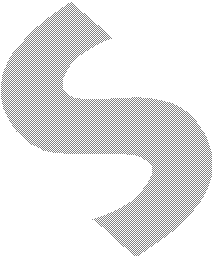
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| **MINISTRY OF NATIONAL HEALTH SERVICES REGULATIONS & COORDINATION**  **GOVERNMENT OF PAKISTAN** | LOGO.jpg |
| **PRODUCT VOCABULARY MEDICAL STORE(PVMS) OF OPTHALMOLOGY EQUIPMENT-2022** |  |

|  |  |  |
| --- | --- | --- |
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(Mandatory for all equipment)

CERTIFICATE

FOR WARRANTY, RELIABILITY &MAINTENANCE SERVICES

**For all Equipment should be mention must at the time of tender**

* Warranty should be at least of 03 years with parts free of cost.
* Should be reliable in term of performance.
* Spare Parts are should be readily available within 10 years.
* Qualified engineers with supplier for maintenance should be available.
* Country of origin: USA, Japan & Western Europe with any dual certification (MHLW/ JIS, FDA, CE, MDD).

**Serial No.1(A)**

**POSTERIOR VITRECTOMY MACHINE WITH LASER**

**(OPHTHALMIC MICROSURGICAL SYSTEM)**

1. **Gen** This instrument is necessary for Posterior Segment Surgeries of the ophthalmology including retinal reattachment surgeries etc.

1. **Physical Characteristics**
   1. Vitrectomy console unit with Trolley
   2. Touch screen controls
   3. Venturi base Pump with Peristaltic Simulation for anterior segment
   4. Dual Linear/ Dual Dynamic Drive programmable foot control panel
   5. Multi mode reflux (Micro, proportional , continuous)
   6. Multi mode priming (Suction, push Pump)
   7. On fly bottle change without surgical interruption (No priming, No bubbles)
   8. Bottle low/ empty warning.
   9. Built-in Integrated pressurized infusion/irrigation and IOP control. IOP control within 0 -120 mmHg pressure.
   10. Regulated air source for infusion, irrigation and aspiration.
   11. Vacuum or flow controlled modes:
       1. Vacuum control range – 0 to 650 mm Hg.
       2. Flow Control range – 0 to 20 cc/min for Vitrectomy, 0 to 60 mm Hg for Cataract
   12. Anterior Vitrectomy
   13. Dual suction lines
   14. **VIRECTOMY**
       1. Dual Actuation pneumatic guillotine cutter High speed vitrectomy cutter 20 Ga, 23 Ga, 25+ Ga , 27+ Ga can drive 10,000 cuts/ min and upgradable to20,000 cuts/ min Three duty cycles with same parameters
       2. Linear /proportional/ 3D Vitrectomy
   15. **ILLUMINATION**
       1. Two independent light sources Advanced Xenon light source.
       2. Calibrated display of brightness. Infrared, ultraviolet and selectable retinal prevention filters for enhanced patient safety.
   16. **TAMPONADE**
       1. Air Injection – Air fluid exchange, Auto gas fill Viscous fluid injection / extraction Linear injection control via foot switch system Integrated vented gas forced infusion
   17. **DIATHERMY**
       1. 1.5 MHz, fixed mode, proportional mode
       2. Bipolar micro forceps, Intraocular diathermy
   18. **INTEGRATED LASER**
       1. Embedded green laser for endolaser .
   19. **PHACOFRAGMENTATION**
       1. Light weight fragmentation hand piece with linear/ fixed/ pulsed modes.

**3**. **Accessories to be supplied with the System**

* **Accessories for Bipolar functions :**
* Reusable Bipolar cable
* Reusable Bipolar Forceps
* **Phaco emulsification Accessories:**
* Reusable Phaco Hand piece
* Reusable Phaco Tip (Varity of tips, )
* **Phaco Fragmentation Accessories:**
* Reusable, 20 Ga Pars Plana Tip for

Phaco Fragmentation

* Reusable Fragmatomehandpiece

**4**. **Environmental Conditions**

1. Can work in temp varying from 10oC to 35oC
2. Suitable for operation in a room at room temp.

**5**. **Reliability and Maintenance**

1. **Should be** reliable in terms of performance.
2. **Should be** easy to install.
3. **Should have** low maintenance cost.
4. Spare parts **should be** readily available.
5. Qualified engineers with supplier for maintenance **should be** available.
6. Compatible stabilizer / UPS **should** also be included in the system.

**6**. **Miscellaneous Requirement**

a. Warranty/guarantee period should be at least 1 years from the date of commissioning of the Equipment. During warranty period the system should be 95% up time calc on monthly basis**.**

b. Firm will render assurance for availability of spare parts for a period of 7-10 years.

c. Should be made in USA / UK /Japan.

Should be FDA approved.

**Serial No.1(**B**)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **POSTERIOR VITRECTOMY UNIT (VENTURI)** |
| Clinical Purpose | Surgery. Retina. |
| **TECHNICAL SPECIFICATIONS** | |
| Vitrectomy cutter type: Pneumatically Driven 20G, 23G, 25G/27G Compatibility disposable or Autoclavable  Cutting Rate : Range Min 4000 cuts per minute or better.  Actuating Medium: Pressurized Air from external source. Control:  Dual linear system foot switch & screen.  Diathermy: Bipolar 20G, 23G, 25G/27G compatibility.  (Auto clavable or Disposable).  Fluidics: Vacuum up to 500mmhg or better.  Cassette: Disposable.  Tubing set: Auto-clavable /Disposable  Pump Type: Venturi and Peristaltic Scissors & Forceps: Compatible.  Start up Accessories Kit.  Illumination type: Min two independent light sources or converter compatible. Illumination bulb type: Xenon or LED.  Tamponande: Oil injection module, extraction module, air tamponadePhaco Emulsification Hand piece 4 crystal or better. (Quantity 2) Fragmatome: Intravitreal fragmentation compatible.  With original trolley and motorized bottle height control. Electric power: 200 – 240V, 50Hz AC, | |
| **ACCESSORIES:**  Pneumatic or motor driven guillotine cutter reusable Tubing set.  Bipolar cable, Bipolar forceps, Bipolar eraser, Endo diathermy probe. Infusion cannula 2.5mm, 4.0mm, 6.0mm  Extrusion hand piece 20G,23, 25/27 G Micro vitrectomy scissors.  Micro vitrectomy forceps. Sclera plugs 20G, 23 Sclera plug forceps.  Posterior vitrectomy cutters 20G, 23, 25/27 G Tubing set for fluid-gas exchange  Original instrument stand | |

**Serial No.2 (A)**

**OPTICAL COHERENCE TOMOGRAPHY WITH FFA**

* High resolution *Angio Scan* OCT-*Angiography image*
* Angio scan for angiography without injection
* FFA(Fundus Fluorescein Angiography)
* 50000 A-Scan or more / Sec
* Disc Map, Disc Circle, Disc Radial
* 3D wide Scan image 12x9
* 3D Macula and Disc analysis
* Wide area scan and high definition OCT
* Tracing HD plus for accurate averaging of maximum 120 or more then.
* Selectable OCT Sensitivity
* Torsion Ophthalmology tracer for accurate image capture.
* Multifunctional follow-up
* Customized report
* Fully automatic align, auto focus and Auto shoot
* Anterior segment module
* Confocal scanning laser ophthalmoscope
* OCT Scanning Pattern 10 kinds or better
* 12 FPS frame rate of fundus observation
* Original Motorized stand
* Smoothly control with Joy stick

**Miscellaneous Requirement**

* Warranty/guarantee period should be at least 3 years from the date of commissioning of the Equipment.
* During warranty period the system should be 95% up time calc on monthly basis**.**
* Firm will render assurance for availability of spare parts for a period of 7-10 years.
* Should be made in Europe/ USA / UK /Japan.
* Should be FDA approved.

**Serial No.2 (B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPTICAL COHERENCE TOMOGRAPHY (OCT)** |
| Clinical Purpose | Diagnostic. Retinal diseases |
| **TECHNICAL SPECIFICATIONS** | |
| Scan modes: Confocal/ LSO/ SLO/ live OCT fundus/ fundus image /swept source  Scan speed: Min27,000 A-Scan/sec ormore  Including Optic Nerve Head Analysis, Macula Anterior Segment: With Anterior Segment Module Computer: Originally Supplied by the manufacturer. | |
| **ACCESSORIES:**  Color laser printer with one extra toner set  With original motorized table/Imported from Europe/Japan/USA. | |

**Serial No.2 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **ULTRA WIDE FIELD RETINAL IMAGING SYSTEM** |
| Clinical Purpose | Diagnostic. Retina |
| **TECHNICAL SPECIFICATIONS** | |
| Ultra-Wide field Angle: 200 degree or better  Montage: 220 degree or better  Automatic focusing  Auto/Manual gain  Auto montage  Auto/Manual laterality  Auto fluorescence green/ blue  Stereo imaging  Light source: Red/Blue/green LED /Infrared/ Laser  Power: 220V, 50Hz AC.  Computer: Originally Supplied by the manufacturer | |
| **ACCESSORIES:**  Compatible Printer.  With original motorized table/Imported from Europe/Japan/USA. | |
| OPTIONAL:   1. FFA 2. ICG (End user to specify) | |

**Serial No.2 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **DIGITAL FUNDUS CAMERA (VARIABLE ANGLE)**  (Digital Retinal Imaging System) |
| Clinical Purpose | Diagnostic. Retina |
| **TECHNICAL SPECIFICATIONS** | |
| Digital Fundus Camera (variable Angle) Variable Angle: Max 50o or better.  FocusingSystem:FinefocusingandCoarsefocusing.  TiltingFacilityprovidedbothhorizontalandvertical.  Optimumworkingdistance:35mmonward.  Provided with range of examiner’s dioptric compensation.  Facilityprovidedforfundusfluoresceinangiographyalong-withsetoftwostandardfilters.  Lightsourceforobservation:HalogenLampandforflashXenonbulb.  Flash intensity: 300W or better.  Fixation light and internal fixation target  Power: 220V, 50Hz AC. | |

**Serial No.2 (E)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **ULTRA WIDE FIELD GUIDED SWEPT SOURCE OCT** |
| Clinical Purpose | Diagnostic. Retinal diseases |
| **TECHNICAL SPECIFICATIONS** | |
| Scan mode: Confocal / LSO/ SLO/ live OCT fundus view /live colored fundus image/ swept source Scan  Scan speed: Min 100,000 A-Scan/sec or more  Scan Width / size: Up-to 23mm  Scan Type: Ultra Widefield Guided OCT for far Periphery (up-to 200°)  Image Modalities: Color Composite image, Red Laser View, Green Laser View, Auto Fluorescence, FFA, ICG  Fundus Angle: 200° image of Retina in Single capture  Time per image: Less than 1 second  Computer: Originally Supplied by the manufacturer. | |
| **ACCESSORIES:**  Color laser printer with one extra toner set  With original motorized table/Imported from Europe/Japan/USA. | |

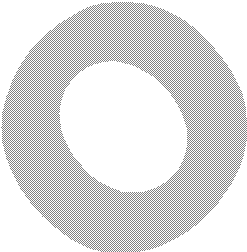
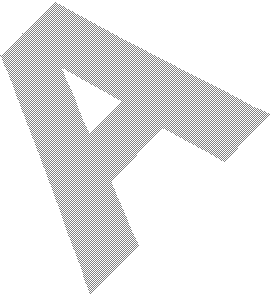
**Serial No.3 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPERATING MICROSCOPE**  (Basic operating microscope withStepped magnification) |
| Clinical Purpose | Surgery |
| **TECHNICAL SPECIFICATIONS** | |
| Floor mounted stand, microscope body with5 step magnification changer (manual or motorized)  Built in coaxial illumination ,motorized fine focusingand manual/ motorized coarse focusing  Objective: f=175 orf=200.  Binocular tube inclined at fixed angle.  Eyepiece: 10xor12.5xwith dioptricadjustment.  Sterilization protective caps for all drive knobs.  Illumination with controllable intensity with halogen or LED.  With or without fiber optics.  Water proof foot control pannel Upgradable with accessories. | |
| **ACCESSORIES:**  Six spare halogen bulbs (in case of halogen illumination).  Dustcover | |

**Serial No.3 (B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPERATING MICROSCOPE**  (Basic operating microscope with Zoom) |
| Clinical Purpose | Surgery |
| **TECHNICAL SPECIFICATIONS** | |
| Floor stand mount microscope body with zoom (ratio1:5orbetter).  Linear/ Continuous zooming  XY coupling  Built in coaxial illumination with red reflex.  Motorized fine focusing and manual or motorized coarse focusing  Objective f=175mm/ f=200mm  Binocular tube: inclined at a fixed angle  Eyepiece: 10 X or 12.5 X with dioptric adjustment  Halogen/LED illumination with controllable intensity with/without fiber optic cable  Water proof foot control panel.  Sterilizeable protective caps for all drive knobs | |
| **ACCESSORIES:**  06 spare halogen lamps (in case of halogen illumination).  Dustcover. | |

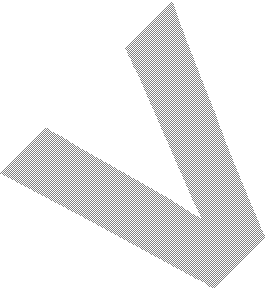
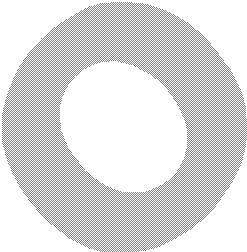
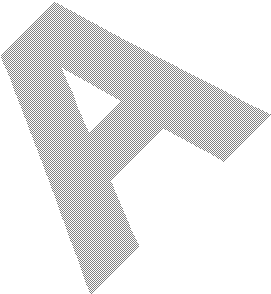
**Serial No.3 (C)**



|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPERATING MICROSCOPE**  (Teaching Operating Microscope) |
| Clinical Purpose | Surgery |
| **TECHNICAL SPECIFICATIONS** | |
| Floor mounted stand, microscopic body with linear motorized zoom (1:5 or better),  Builtincoaxialillumination,motorizedfinefocusing,coarsefocusing(ManualorMotorized). Objective:f=200.  Motorized XY coupling.  Binocular tube inclinable at various angles  Eyepiece:10xor12.5xwithdioptricadjustment.  Fullyapochromaticallycorrectedopticswithhighlighttransmission.  Sterilizationprotectivecapsforalldriveknob03sets.  Halogenilluminationwithcontrollableintensity/LightEmittingDiode,withorwithoutfiber opticcable.  Waterprooffootcontrolpanel. Upgradablewithaccessories.  Binocular stereoscopic assistant’s attachment with inclination  CCTVattachmentincludingadapter,3CCDorCMOSCamerawithbeamsplitter.  Digitalrecordingsystem/USBrecordingwithharddrive.  20”orbetterLCDorLEDmonitor(IncaseofMedicalgrade)/30”orbetterLCDorLEDmonitor (Incaseofnonmedical grade) i.eto specify.  Retinal vision system with attachment. Including (120o, 90o, and Macular lens) | |
| **ACCESSORIES:**  Dust cover.  06 spare bulbs (in case of halogen illumination). | |

**Serial No.3 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPERATING MICROSCOPE**  (Teaching operating microscopeWith electromagnetic brakes) |
| Clinical Purpose | Surgery |
| **TECHNICAL SPECIFICATIONS** | |
| Floor mounted stand, microscopic body with linear motorized zoom (1:5 or better),  Built in coaxial illumination, motorized fine focusing, coarse focusing (Manual or Motorized). Electromagnetic brakes  Objective: f=200. Adjustable Motorized XY coupling & focusing  Binocular tube inclinable at various angles  Eyepiece: 10 x or 12.5 x with dioptric adjustment.  Fully apochromatically corrected optics with high light transmission.  Sterilization protective caps for all drive knob 03sets.  Halogen illumination with controllable intensity /Light Emitting Diode, with or with out fiber optic cable.  Water proof foot control panel. Upgradable with accessories.  Binocular stereoscopic assistant’s attachment with inclination  CCTV attachment including adapter, 3CCD or CMOS Camera with or with our beam splitter.  Digital recording system/ USB recording with hard drive.  20”or better LCD or LED monitor (In case of Medical grade) /30”or better LCD or LED monitor (In case of nonmedical grade)(i.e to specify).  Retinal vision system with attachment. Including (120o, 90o, and Macular lens) | |
| **ACCESSORIES:**  Dust cover.  06 spare bulbs (in case of halogen illumination). | |



**Serial No.4 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **NONCONTACT/OPTICAL BIOMETER** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Fully Non contact measurements and calculation of IOL power for  IOL Toric Architect with toric marking  Central Corneal Thickness:300 – 750 um  Lens thickness  Anterior Chamber Depth: 1.00 – 6.00 mm  Axial Length: 12mm to 35mm  Pupillometry  Keratometry Automated: 4 – 10 mm  Display of individual measurement’s SD (standard deviation).  Highly Preciseaxiallengthvaluesalongthevisualaxis,independentofpupilsize  Measuresmyopes,Aphakes,Pseudo-Phakesandsilicone-filledeyes  Automaticright/lefteyerecognition  Light source: Swept Source  Standard FormulaeforIOLcalculation likeBarret Universal II, Barrett True – K, Haigis, Hoffer-Q, Holladay I, SRK-II and SRK/T,  DataexporttoCD-RW/USBflashdrive | |
| **ACCESSORIES:**  With original motorized table/Imported from Europe/Japan/USA. | |

**Serial No.4 (B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **BIOMETER (A-SCAN)** |
| Clinical Purpose | Diagnostic for IOL power calculation |
| **TECHNICAL SPECIFICATIONS** | |
| Ultrasonicbio-meterformanualorautomaticfreezingsystemviafootpedalwhenvalid measurement isdetected.  Measurementofaxiallength,ACDandlensthickness,featuresmeasurementof5ormore reading with adjustablegates.  Standarddeviationofmultiplescans,fullydigitizeddisplayofrealtime echograms. Solidprobewithfixationlight.  Audio feedback for probe alignment. With standard formulae. | |
| **ACCESSORIES:**  Compatible laser printer for all data. | |

**Serial No.4 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **B SCAN** |
| Clinical Purpose | Diagnostic. Retinal diseases |
| **TECHNICAL SPECIFICATIONS** | |
| Digital Memory and image freezing.  LCD/TFT monitoralphanumericoranalogdisplayofoverallgain.  Nearfieldanddynamicsetting.  Depthofexamination~~.~~35mm or better  InBmodescanningangle40oormore.  10MHzorbetterBProbe.  Gray scale 256 or better. | |
| **ACCESSORIES:**  With compatible laser printer. | |

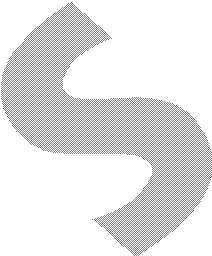
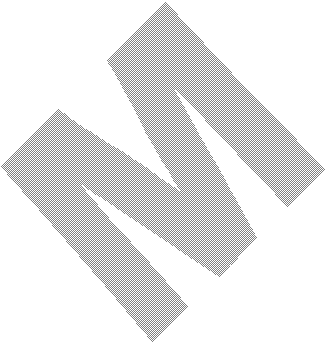
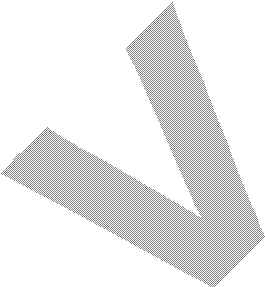
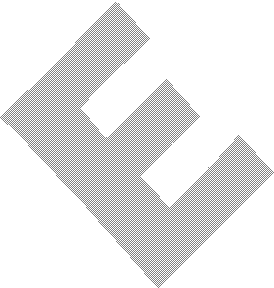
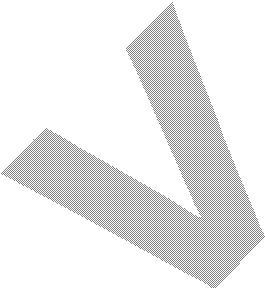
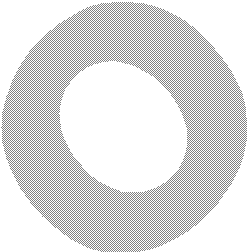
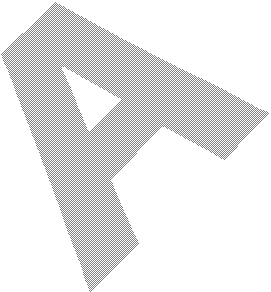
**Serial No.4 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **A&B SCAN WITH BIOMETRY** |
| Clinical Purpose | Diagnostic/Ophthalmic Ultrasonic examination of vitreo retinaldiseasesandintraocularlenspowercalculation |
| **TECHNICAL SPECIFICATIONS** | |
| Digital Memory and image freezing.  A&Bmodeswithcontrolvectorandbio-metricrulerwithcomputertocalculateIOLpower.  LCD/TFTmonitoralphanumericoranalogdisplayofoverallgain.  Near field and dynamic setting.  Depth ofexamination 35 mm or better  InB Scan modescanningangle40oormore.  10MHzorbetterBProbe.  10 MHz or better biometry probe. | |
| **ACCESSORIES:**  With compatible laser printer and one extra toner. | |

**Serial No.5 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **CORNEAL ANTERIOR AND POSTERIOR TOPOGRAPHY SYSTEM** |
| Clinical Purpose | Diagnostic for cornealdiseases |
| **TECHNICAL SPECIFICATIONS** | |
| Topographical keratoconus detection  Topographyandelevationmapsoftheanteriorandposteriorcornealsurface Pachymetrymaps.  Refractive maps  Iris image and horizontal white to white measurement Comparison and differential analysis.  Scheimpflug/Slit scan/placido based  Computer system originally supplied by manufacturer | |
| **ACCESSORIES:**  Color Laser printer with one extra toner set  With original motorized table/Imported from Europe/Japan/USA. | |

**Serial No.6 (A)**



**CORNEAL CROSS-LINKING SYSTEM (CXL SYSTEM)**

**WITH OPHTHALMOLOGY TRACKING& PACHYMETER**

It should be capable to perform non-invasive treatment to stop progressive keratoconus as well as related ectatic disorders (such as PMD and iatrogenic ectasia) and has a regularization effect on corneal topography through UV-Light. The treatments should be inexpensive, easy to perform, and easy for the patient.

**Technical Specification:**

* Radiation system: (Wavelength: 365 nm)⎫
* Illumination Intensity: 3 - 9 – 18 - 30 mW/cm2
* Working Distance: 50 mm ± 5 mm
* Light Emission: Continuous, interval or pulsed wave
* Aperture (Electronically Adjusted): 3 – 12 mm Electronically Adjusted
* Timer: Automatic time adjustment 3 - 5 – 10 - 30 min
* Electric Power: 100-240 VAC, 50/60 Hz.

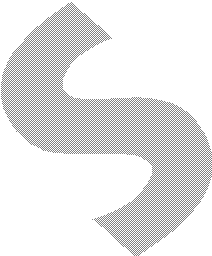
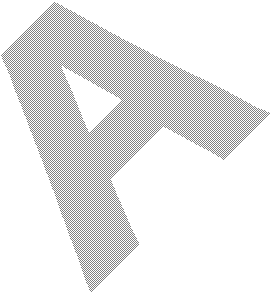
**Features:**

* Variable setting from 3m W upto 30m W with simultaneous radiation time adjustment.
* Continuous, pulsed and LASIK radiation mode.
* Self-calibration and self-adjustment.
* Color Touch Screen.
* It should have an integrated infrared camera for ophthalmology tracking and ensure proper distance.⎫ The tracking area as well as the aperture can be individually set to ensure safety of the Limbus. It includes a built-in calibration verification to continuously measure emitted light intensity.
* Bluetooth communication interface with powerful treatment report generation
* Ultrasound contact Pachymeter.

**Reliability and Maintenance:**

* Should be reliable in term of performance.
* Should Have Low Maintenance cost.
* Spare Parts are should be readily available.
* Qualified engineers with supplier for maintenance should be available.

Should be made in EU / USA / UK / Japan



**Serial No.7 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPHTHALMIC YAG LASER** |
| Clinical Purpose | Therapeutic |
| **TECHNICAL SPECIFICATIONS** | |
| Q-Switch Nd- YAG Laser.  Solid state Laser  Wavelength:1064nm.  Laser power:8-10mJ  Pulsed Length: 2 to 4 nsec.  Aiming Beam: HeNe/Diode beam rotating 360 degrees for accurate alignment, dual Beam Method  Cooling :Air  Spot size: Less then 20 micro  Power:220V,50Hz.  Latest Pulse technology controls pulse number under the CPU and provide 3 Hz (single) and 1.5 Hz (burst) fast repetition rate.  Offers 0.3 to 10 mJ, continuously adjustable in increments of 0.1 mJ, allowing the precise tissue effect.  Focus Shift ± 0 to 500 μm (continuously variable)  Power Out put OFF, 0.5 to 25 µW  Q-Switched Type  4 nsec Pulse Duration  Spot Size 8 µm  5 Step Slit Lamp Magnification  Complete on Local Motorized Stand  optional : two laser applicable lenses | |
| **ACCESSORIES:**  With original motorized table/Imported from Europe/Japan/USA. | |

**Serial No.8 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **RETINALPHOTOCOAGULATOR**  (GREEN LASER) WITH LIO |
| Clinical Purpose | Therapeutic. Retinal treatment |
| **TECHNICAL SPECIFICATIONS** | |
| Wavelength:532nm/ 514 nm  Powerattissueupto:1Worbetter.  Pulse Duration: 10 – 650 ms  Repeat interval: 100ms to 1000ms or better.  Frequency: 1-9 Hz or better  The instrument should be capable to add LIO and endoprobes, and adapters for retina illumination without the need for calibration.  Laser: Frequency doubled Nd: YVO, 532 nm  Power 3000 mW, restricted to 2000 mW  Spot sizes 50, 100, 200, 300 and 400 µm  Aiming beam 635 nm, adjustable brightness projected as spots or outline  Patterns Square, sector, circle, triple arc, line, single spot (repetition)  User interface 10,4” touch screen Smart Wheel  Information projection on retina  A touch screen panel with settings and pattern selection, parameters should be marked and easily accessable.  The instrument should project all customary setting on retina during the treatment such as laser power, pattern selection, size and rotation.  The laser energy should be accurately titrated to achieve therapeutic effect with minimal collateral damage, and less thermal diffusion to the choroid results in less pain for the patient.  Photocoagulation makes a full PRP faster. High-speed galvanometric scanners – various patterns delivered significantly faster and usability improves the user experience both for the patient and physician.  Must be secure for both Patient And Physician:  Restricted pattern size  Fluence calculation combined with spot size control  Pattern for macular grid with safety settings  Outline projection of patterns to ensure the visibility of both tissue to be treated and spot intensity immediately after delivery.  Restricted total time of pattern delivery  Compatible UPS should be included with 30 minutes backup. | |
| **ACCESSORIES:**  Standard Accessories | |
| **OPTIONAL:**  Endolaser probes gauge and quantity to be decided by end user | |

**Serial No.8 (B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **RETINAL PHOTO COAGULATOR**  (GREEN LASER) |
| Clinical Purpose | Therapeutic. Retinal treatment |
| **TECHNICAL SPECIFICATIONS** | |
| Wavelength:532nm/ 514 nm  Powerattissueupto:1Worbetter.  Pulse Duration: 0.05sec to 1sec or better.  Repeat interval: 3 interval selection or better.  Cooling: Thermoelectric / Air cooled.  With foot switch.  Slitlampadaptationwithspotsize50to500µm(parfocalrange)orbetter.  Standardhalogenslitlamponoriginalstand. | |
| **ACCESSORIES:**  Standard Accessories  With original motorized table/Imported from Europe/Japan/USA. | |

**Serial No.8 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPHTHALMIC MULTI-SPOT SOLID STATE PHOTOCOAGULATOR (PATTERN LASER)** |
| Clinical Purpose | Therapeutic, Retinal treatment |
| **TECHNICAL SPECIFICATIONS** | |
| Wave length: 532nm/577nm  Power at tissue up to: 1 W or better.  PulseDuration:0.1secto1secorbetter  Cooling: Thermoelectric / Air cooled With footswitch  Spotsize:100to400µmorbetter  Singlespotmode:single,repeat  Patterns:Square,circle,arc,line,singlespot  Standardslitlamponoriginalstand.  Standard filter  Laser application lenses – One macular grid, One standard PRP and one wide field lens | |
| **ACCESSORIES:**  With original motorized table/Imported from Europe/Japan/USA. | |
| **OPTIONAL:**  Endoprobe  Indirect laser delivery system | |

**Serial No.8 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **DIODE LASER** |
| Clinical Purpose | Therapeutic. |
| **TECHNICAL SPECIFICATIONS** | |
| Consistingofmainconsolewithpowersupply.  Treatmentwavelength:805/810nm  Power :4W or better Aiming beam: adjustable Spot size : Variable  Pulseduration:0.01sec.to0.5sec.  Cooling :Air Footswitch.  With standard accessories including Micro Pulsed-Cyclophotocoagulation probe/ Standard Cyclophotocoagulation Probe, DCR probe | |
| **ACCESSORIES:**  With original motorized table/Imported from Europe/Japan/USA. | |
| **OPTIONAL:**  Endolaser probes gauge and quantity to be specified by enduser. | |

**Serial No.9 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **AUTO REFRACTOMETER WITH KERATOMETER** |
| Clinical Purpose | Diagnostic. To determinetherefractivestatusoftheeyeand powerof cornea. |
| **TECHNICAL SPECIFICATIONS** | |
| Withautomeasurement&printoutwithstandardaccessories.  Manualormotorizedchinrestmovement.  *Measuring range:*  Spherical:±20Dorbetter  Cylinder:±6Dorbetter.  Axis: 1 to180o.  Pupil distance: Max 85mm (increment 1mm).  Display: DigitalonTVorLCDmonitorwithprinter.  Electricpower:220-240VAC,50Hz. | |
| **ACCESSORIES:**  With6paperroll,dustcoverandcleaningkit. Onlocallymademotorizedtable. | |

**Serial No.9 (B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **KERATOMETER (MANUAL)** |
| Clinical Purpose | Diagnostic. To determine the power of cornea. |
| **TECHNICAL SPECIFICATIONS** | |
| Corneal radius of curvature 6.6mm to 9.2mm or better. Cornealrefractivepowerrangingfrom36.5Dto51Dorbetter.  Axisofcornealastigmatism0to180.  Javal/Shiotz/Sutcliffe/Internal reading | |
| **ACCESSORIES:**  Dust cover  Local made motorized table. | |

**Serial No.9 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **HAND HELD AUTO REFRACTOMETER WITH KERATOMETER** |
| Clinical Purpose | Diagnostic.Todeterminethe refractive erroroftheeyeandpower. |
| **TECHNICAL SPECIFICATIONS** | |
| Withautomeasurement&printoutwithstandardaccessories.  *Measuringrange:*  Spherical:±20D or better.  Cylinder:±6Dorbetter.  Axis: 1 to180o.  Display: LCD monitor  MEASUREMENT OF RADIUS OF CURVATURE  Radiusofcurvature 5.00to11.00mm(in0.01mmincrement)  Cornealastigmatism in 0.25Dincrement  CylinderAxis 1°to180° Electricpower:220-240VAC,50Hz.  Rechargeable battery workstation | |

**Serial No.9 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **ULTRASONIC PACHYMETRY** |
| Clinical Purpose | Diagnostic. To determine thickness of cornea. |
| **TECHNICAL SPECIFICATIONS** | |
| Providing corneal thickness measurements Featuring freeze frame  Microprocessor controlled electronics Audible beep on proper positioning  Corneal thickness averaging based on multiple measurements | |
| ACCESSORIES:  Solid probe  Printer | |

**Serial No.10 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPHTHALMOSCOPE & RETINOSCOPE SET** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Standard illumination aperture dial contains small aperture, standard aperture, concentric scale and slit aperture.  Corrective power range:+25 to -25D or better.  Single Control for streak width and streak rotation,  Streak revolves360o.  Head rest to prevent operator’s spectacles from getting scratched.  SeparatehandleswithrechargeablebatteriesforRetinoscope&ophthalmoscope.  Rechargeablehandleswithdualdeskcharger/wallmounted. | |
| **ACCESSORIES:**  3sparebulbsforOphthalmoscope (in case of non-LED illumination) 3sparebulbsforRetinoscope.(in case of non-LED illumination)  Carrying case | |

**Serial No.10 (**B**)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPHTHALMOSCOPE** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Standardillumination, aperture dialcontainssmallaperture,standardaperture,concentric scale and slitaperture.  Corrective power range: +25 to -25D or better | |
| **ACCESSORIES:**  Rechargeablehandlewithcharger&batteries.  3 sparebulbs.(in case of non-LED illumination)  Carrying case | |

**Serial No.10 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **INDIRECT OPHTHALMOSCOPE** |
| Clinical Purpose | Diagnostic/Examination of retina. |
| **TECHNICAL SPECIFICATIONS** | |
| Head mounted (adjustable). Illumination LED or Halogen.  Pupillarydistance& size adjustable  Output voltage: variable voltage power supply.  Filters:Redfree,Cobaltblue,  Teachingmirror.  Scleraldepressor,detachmentchartand carryingcase. | |
| ACCESSORIES:  With06sparebulbsonlyforhalogenilluminationophthalmoscope.  20Dlensand28Dlens | |
| OPTIONAL:  Cordless | |

**Serial No.10 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **RETINOSCOPE** |
| Clinical Purpose | Diagnostic. To determine the refractive status of the eye. |
| **TECHNICAL SPECIFICATIONS** | |
| Standard illumination,  Single Controlforstreakwidthandstreakrotation,streakrevolves360o. Headresttopreventoperator’sspectaclesfromgettingscratched. | |
| **ACCESSORIES:**  3 spare bulbs. (in case of non-LED illumination)  Carrying case  Rechargeable handle with charger & batteries. | |

**Serial No.10 (E)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **FOCIMETER (DIGITAL LENSOMETER)** |
| Clinical Purpose | Diagnostic. To determine the power of lenses. |
| **TECHNICAL SPECIFICATIONS** | |
| Digital lensometer with digital display  Target: Pin hole corona.  Vertex power range: 0 to ± 25D.  Steps : 0.25D orbetter.  Cylinder axis : 0 to 180o . Prismaticpowerrange:5prismD.  Electricity: 220V, 50Hz AC, or battery operated. | |
| **ACCESSORIES:** | |

**Serial No.10 (F)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **FOCIMETER / LENSOMETER ( MANUAL)** |
| Clinical Purpose | Diagnostic. To determine the power of lenses. |
| **TECHNICAL SPECIFICATIONS** | |
| Type: ocular internal reading with eyepiece.  Target: Pin hole corona.  Vertex power range: 0 to ± 25D.  Steps : 0.25D orbetter.  Cylinder axis : 0 to 180o . Prismaticpowerrange:5prismD.  Electricity: 220V, 50Hz AC, or battery operated. | |
| **ACCESSORIES:**  With one spare bulb (only for halogen illumination). | |

**Serial No.11 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **DISTANT DIGITAL VISUAL ACUITY SYSTEM** |
| Clinical Purpose | Diagnostic. To determine the refractive status of the eye. |
| **TECHNICAL SPECIFICATIONS** | |
| Computer Specifications (May be Locally Procured):  Latest PC attached with highly upgradeable specs  LCD Type Monito 17’’.or more  High Resolution:  ETDRS Log MAR Chart, Snellen& Sloan Letters, LEA Symbols, LEA Numbers  Low Contrast Testing  Allen Pictures, HOTV, Tumbling “E”, Landolt “C”, red Green  Crowding / Interactive Bars, Worth Four Dot, Phoria Fixation Disparity  Astigmatic Dial, Three mines same size, Single Vertical Line  Color Blindness screening, LCD Stereo Testing using Shutter  Optotypes Pointer, Unlimited user defined protocols, Cycling Optotypes.  Multi lines, User selectable default lines.  Complete randomization, Streamlines Video Select & Display, Quick Copy Video Control.  Ophthalmology magnifications Integration Possible. | |

**Serial No.11 (B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **REFRACTION BOX / TRIAL LENS SET**  (with Complete accessories) |
| Clinical Purpose | Diagnostic. To subjectively determine the refractive status of the eye for children and adults |
| **TECHNICAL SPECIFICATIONS** | |
| Sphere: ±0.12 D to ±24.00D.  Cylinder : ±0.12 D to ±6.00D.  Prisms: 1 to10D  With unbreakable lightweight and aluminum/ Plastic mount sand standard accessories in carrying case.  Including different sized trial lens frames for adults and children | |

**Serial No.11 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **JACKSON CROSS CYLINDER** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Power:  ±0.5 & ± 0.25D (pair)with handle and without handle | |

**Serial No.11 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **CONTRAST SENSITIVITY CHARTS** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Cardiff Pediatric Contrast Sensitivity Test covers 12 contrast levels from 2.17 to 100  PreferentialLookingTestHidingHeiditestingvaryinglevelsof1.25%,2.5%,5%,10%,25%and  100%.  PediatricandAdultNearContrastTestBookstesting20/400to20/10in17increments Lowcontrastflipchartsvariousagegroups  Illuminated low vision test charts | |

**Serial No.11(E)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **COLOUR VISIONTESTING CHART (ISHIHARA PLATES)** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Ishihara type.  The test to consist of 24 plates or more to be used to test for congenital colour blindness.  Eachplatetopresented signconsistingofnumeralsandwindinglinesformedbycoloureddots withabackgroundofcoloureddots,theplatestobenumberedandtobesuppliedwitha protective cartonandaninstructionbook. | |

**Serial No.11(F)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **VISION TESTING BOX FOUR SIDED WALLMOUNTED (ILLUMINATED SNELLEN CHART) / FIXED WALL HANGED SNALLEN CHART** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Illuminated Testing box to be wall mounted, to be supplied with the following panels,  1 English alphabet  1 illiterate “E”,  1 Urdu alphabet and 1 K pictures  To be manually controlled | |

**Serial No.11(G)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **LCD/LED VISION CHART** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| 19 inch or betterVision charts, Contrast sensitivity charts, color vision chart, pediatric vision charts | |

**Serial No.11(H)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **CHART PROJECTOR** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| With20chartsorbetterincludingmasks  Pictures forchildren  Number and letters with cordless remote control | |
| **ACCESSORIES:**  Screen with 01 spare bulb | |

**Serial No.11 (I )**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **EXOPHTHALMOMETER** |
| Clinical Purpose | Diagnostic. To check protrusion of eye. |
| **TECHNICAL SPECIFICATIONS** | |
| Herteltypeexophthalmometertohaveascaletomeasurethedistancebetweenthelateral canthiandascaleoneithersidetomeasuretheprotrusionofeacheye. | |

**Serial No.11 (J )**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **MADDOX WING** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Handheldwingtestusedfortestingforthedetectionandmeasurementofheterophoria.  Metalconstructionwitharrowandscale. | |

**Serial No.11 (K)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **HESS SCREEN ELECTRIC WITH CHIN REST** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Unitto consist of a screen, which incorporates the original Hess pattern.  To be supplied with Diplopia goggles, a torch and then by using the in association with the illuminated screen Pattern, eye dissociation may be diagnosed. | |

**Serial No.11 (L)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **STEREO TEST WIRT FLY** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Frisby stereo test. | |
| **ACCESSORIES:**  To be supplied with stereo test screener | |

**Serial No.11 (M)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **ORTHOPTIC SET** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Complete orthoptic assessment , diagnostic and therapeutic trial set provided by the required manufacturer | |

**Serial No.11 (N)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **PRISMS SET LOOSE** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| 0.5, 1, 2, 3, 4, 5, 6 7, 8, 9, 10, 12, 14, 16, 18, 20, 25,30, 35, 40, 45, 50D, red filter.  To be supplied in a case | |

**Serial No.12 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **SLIT LAMP BIOMICROSCOPE WITH DIGITAL IMAGING SYSTEM** |
| Clinical Purpose | Diagnostic for examination of the eye and teaching of students  simultaneously. |
| **TECHNICAL SPECIFICATIONS** | |
| Binoculartubewithverticaltypeeyewidthadjustment.  IlluminationLEDorHalogen.  Eyepieceswithdioptricadjustment10Xto16Xanyonepair.  Magnificationrangevariablefrom10xto35x(5stepsorzoom).  Slit length:variable.  Tiltmechanism:20oorbetter.  Slitimagerotation:0to180o. Filters: Standardfilters  Withhangingtypeapplanationtonometer withextraprismandcalibrationkit Includingoriginaldigitalcamerawithadapter.  PCforreporting:Corei5, 6 GBRAM,1TBharddiskorbetter,USBport.  19’LCD Chin-restpapers. | |
| **ACCESSORIES:**  With original motorized table/Imported from Europe/Japan/USA. Dust cover  Chinrestpapers Breathshield  With extra 12 lamp only for Halogen illumination Slit lamp. | |

**Serial No.12 (B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **SLIT LAMP BIOMICROSCOPE** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Binoculartubewithverticaltypeandeyewidthadjustment.  IlluminationLEDorHalogen.  Eyepieceswithdioptricadjustment10x. Slit length:variable.  Tilt mechanism.  Slit imagerotation:0to180o. Filters:Standard.  With hanging type applanation tonometer with one extra prism and calibration kit. | |
| **ACCESSORIES:**  With original motorized table/Imported from Europe/Japan/USA. Dust cover.  Plastic breath-shield. Chin-rest papers.  With extra 12 lamp only for halogen illumination Slit Lamp. | |

**Serial No.12 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **HANDHELD SLIT LAMP** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| With stereo microscope Magnification:10Xand16X Variableslit  Standard filters Power supply unit | |
| **ACCESSORIES:**  With rechargeable battery pack Complete with carrying case | |

**Serial No.13(A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **DIAGNOSTIC LENSES** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| 20, 68, 78, 90, super field, 3 mirror, indentation gonio lens or any other required by end user. | |

**Serial No.13(B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **LASER APPLICATION LENSES** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| End user to specify | |

**Serial No.14(A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **APPLANATION TONOMETER** |
| Clinical Purpose | Diagnostic/Examination of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Hanging type / Goldman type.  With one extra prism, with calibration kit. | |

**Serial No.14(B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **PNEUMATIC TONOMETER** |
| Clinical Purpose | Diagnostic. To determine intraocular pressure. |
| **TECHNICAL SPECIFICATIONS** | |
| Non contact with measurable range 5 to 50 mmHg or better in 1mmHg step. | |
| **ACCESSORIES:**  Withstandardaccessories,safetylocksand built-in printer. Withlocallymademotorizedtable. | |

**Serial No.14 (C)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **PERKINS TYPE HANDHELD TONOMETER** |
| Clinical Purpose | Diagnostic.Formeasurementofintraocularpressureinchildren. |
| **TECHNICAL SPECIFICATIONS** | |
| Applanation tonometer for IOP. Hand held type.  Double prism interchangeable. Compact light weight.  Built in illumination.  Scalerangeof1to60mmHg. Directreadingondialscale. | |
| **ACCESSORIES:**  Withtwoprismsandtwocalibrationweights.  Complete incase.  Dry battery cell operated. | |

**Serial No.14 (D)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **HAND HELD TONOMETER (TONOPEN TYPE)** |
| Clinical Purpose | Therapeutic. Used in retinal surgery. |
| **TECHNICAL SPECIFICATIONS** | |
| Pressure range 5 to 60mm Hg or betterand instrument must provides IOP readings that correlate strongly with Goldman Tonometry.  IOP measurement is displayed on two large, easy to-read LCD screens.  Micro strain gauge technology and a 1.0 mm diameter transducer tip.  Advanced microprocessor technology  The average of 10 independent readings, combined with a statistical confidence index, ensures accurate, repeatable, and reliable tonometry results.  Measurement Range: 5 - 60 mmHg.  Power Source: Battery. | |
| **ACCESSORIES:**  Standard Accessories | |

**Serial No.15 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **BIPOLAR ELECTRIC CAUTERY UNIT** |
| Clinical Purpose | Therapeutic/Surgery of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Portable Bipolar electric cautery unit Console with foot switch Pressure regulator Pressure gauge Temperature Display Non-electric defrost On/off pedal switch  With complete accessories  1. Microcontroller based isolated Electrosurgical Generator having both Monopolar and Bipolar outputs designed for all surgical procedures.  2. Smart generator should be able to monitor changes in tissue impedance continuously and adjusts power.  3. Monopolar outputs should have three cutting modes:  a. Low cut for delicate tissue having maximum power of 300w.  b. Pure cut for clean, precise cut in general surgery having maximum power of 200W.  c. Blend mode for cutting with homeostasis having maximum power of 200W. All cut modes should be able to adjust output power depending on tissue density by less than 15% or 5W, whichever is greater.  4. Three Coag Modes with maximum power of 120W  a. Desiccate mode for low voltage contact coagulation suitable for delicate tissue work.  b. Fulgurate mode for efficient non-contact coagulation in most applications.  c. Spray mode should have randomized spray effect of varying amplitude and frequency for coagulating large tissue areas with minimum depth of necrosis.  5. Three bipolar modes with maximum power of 70W  a. Precise mode have fine control of desiccation in delicate tissue.  b. Standard mode for applications at low voltage to prevent sparking.  c. Macro mode for applications on tissue with high resistance.  6. Patient plate monitoring facility and should give audiovisual alarm and deactivate output if contact between patient and patient plate is not proper to eliminate the risk of patient burns.  7. The unit should have two hand switching and two Footswitch Monopolar outputs and one hand switching and footswitching bipolar output.  8. Membrane keyboard for power settings.  9 Individual digital display of power for Bipolar, Monopolar cut and MonopolarCoag | |

**Serial No.16 (A)**

|  |  |
| --- | --- |
| Specialty | Ophthalmology |
| Generic Name | **AUTOMATED PERIMETER/ VISUAL FIELD ANALYZER** |
| Clinical Purpose | Diagnostic. Optic nerve diseases/Neurological diseases |
| **TECHNICAL SPECIFICATIONS** | |
| Perimeterabletoperformdetailedexaminationofvisualfieldfromscreeningtothreshold testing.  Humphrey 30-2 Complete digitally plotted visual field analyzer  3D rotated pic, colored plotting  Quantify Defect, Neurological  Peripheral and Kinetic testing  Accurateexaminationwithcentral80oorbetter.  Program:Screeningtest,thresholdandmacula.  Constant patient monitoring through CCD / CMOS camera.  Defectlevelindicatorinformtheexaminerthestatusofthefieldofvisionwitheverystimulus. DescriptivereportprovidedwithclearstatisticalassessmentofthefielddataMountedon heightadjustablemotorizedtable(original).  Maximum temporal range (degrees) 80 Stimulus duration 0.1 – 9.9s or better  Background illumination 31,5 ASB or better  Test modes Supra threshold age corrected (Screening)  Single intensity included  Full , Fast, & Smart # zone or better threshold included  Specialty test library Bi-Driving, Industrial Medicine, monocular, binocular  Blue-on-Yellow (SWAP)  Test field library Macula 30-2 or better  Nasal step (Glaucoma)  Central Macula 30 or better  Peripheral options  Computer Build-in PC with Touch screen support  Fixation control with blind spot monitor  Eye tracking (video camera)  Eye preview (video camera)  Stimulus White on white, Green on white, Red on white, Blue on yellow  General Testing Features Stimulus size (Goldman size) III IIIIII& V I-V Fovea threshold testing  Automatic pupil measurement  Additional software features  Network connectivity  DICOM export  Targeted perimetry (merging tests with fundus images)  Time adaptive algorithms  Regression analysis  Printer External or network printer connectivity | |

**Serial No.17 (A)**

|  |  |
| --- | --- |
| Specialty | Ophthalmology |
| Generic Name | **Surgical instrument set ( Hight Quality)** |
| Clinical Purpose | Surgical instruments use for different eye surgeries |
| **TECHNICAL SPECIFICATIONS** | |
| Highly précised Titanium tipe/ edges manufactured  Complete surgical instruments set for respective procedures as mention above.  DCR Surgery Set  Cataract Surgery instrument set  Glaucoma surgery set  Strabismus Surgery Set  Complete surgical stainless steel boxes fr easy to pack and autoclave  Individual surgical sets as per requirement. | |
| **ACCESSORIES:**  With original motorized table/Imported from Europe/Japan/USA. | |

**Serial No.18 (A)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPHTHALMIC PHACOEMULSIFICATION UNIT** |
| Clinical Purpose | Therapeutic. Cataract surgery |
| **TECHNICAL SPECIFICATIONS** | |
| Main console with surgeon setting programming.  Phacomodulationchoiceofpulseandburstmode.  Vacumm0-500mmHgorbetter  Provisionfor2.2&2.8mmtips.  Programmablefootpedal.  Peristaltic pump.  Irrigation/Aspirationandphacoemulsificationhandpieces I/Acollectioncassetteorbag(Quantity3)  I/Atestchamber( Quantity3)  Irrigationsleeves (Quantity3)  Phaconeedle30degbevelround(Quantity3)andBendtip(Quantity3).  Reusable anteriorvitrectomycutter (Quantity3)  Phacohandpiece(Quantity2)metalluerlockwithsterilizationbox . | |
| **ACCESSORIES:**  With Original trolley Dust cover | |

**Serial No18(18/B)**

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **OPHTHALMIC PHACOEMULSIFICATION UNIT with Accessories** |
| Clinical Purpose | Therapeutic. Cataract surgery |
| **TECHNICAL SPECIFICATIONS** | |
| **ANTERIOR VITRECTOMY**  1-2000 Cut/Min  Sub Modes  Cut I/A  I/A Cut  Peripheral Irid  Visco-asp  Phacoemulsification 0-650 mmHg  Vitrectomy 0-650 mmHg  Irrigation Aspiration 0-650 mmHg  Power assisted IOL insertion  Continuous,  Pulsed 1-250 pps, on time 0-100%  Burst, Burst on time 2-500 ms,  Bipolar coagulation  10 W max 75 Ω load  76 Vpp @ 1.5 MHz ± 5% 75 Ω load  Advanced fully automated fluid management & peristaltic system  Latest Generation Phacohandpiece with ultrasonic torsional oscillations  32Khz @ 100% Tip stroke .0069 ± .0023 cm & Longitudinal 38.5-42 KHz @ 100% Tip Stroke .0084 ± .0018 cm  Automated IV pole, controlled via the front panel, footswitch  Linear footswitch control of ultrasonic power in U/S steps & aspiration flow rate (AFR) in I/A, VIT, and lens removal modes  Linear footswitch control of vacuum in I/A, VIT, and lens removal modes.  Emission of variable tones for confirmation of system operational status.  Voice confirmation during surgical step or mode changes.  Fold-down flat screen,  Active matrix color LCD with touch screen. .  Multi-channel wireless remote control.  **Upgradable**  Soft ware upgradable | |

|  |  |
| --- | --- |
| Clinical Specialty | Ophthalmology |
| Generic Name | **CRYO SURGICAL UNIT** |
| Clinical Purpose | Therapeutic/Surgery of Eye |
| **TECHNICAL SPECIFICATIONS** | |
| Console with foot switch Pressure regulator Pressure gauge Temperature Display Non-electric defrost On/off pedal switch  CanbeusedonCO2ornitrousoxidegas  Filter And attachments such as connecting hose and reducer Retina and Glaucoma probes with tubing. | |