

Objective Refractometer Mode

Sphere Range:: -25D to +25D (0.12D / 0.25D steps)

Cylinder Range:: 0 to +10 D (0.12D/0.25D steps)

Axis Range:: 0° to 180° (1° to 5° steps)

Minimum Measurable Pupil Diameter:: ø 2.0 mm

PD Measurement :: 20 mm to 85 mm (0.5 mm step)

Input/Output :: USB (input)/RS 232 C (output)/LAN (output)

Power Supply:: 100-240 V AC, 50-60 Hz, 30-70 VA

Display:: TFT screen 7 inches or above

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1.

SLIT LAMP

Slit Lamp (5 Steps)

	Galilean Converging binocular
o Magnification	5 position rotating drum
O Eye pieces	12.5 x
o Total Magnification	6x, 10x, 16x, 25x, 40x
o Real field of view	44 29 16 9 6
 Interpupillary adjust 	48.5 – 80 mm
o Slit Length	0.2 – 12 mm
 Slit Width continuously variable 	0 – 12 mm
o Slit projection	1x
 Aperture diaphragms 	0.2/1/3/5/9/12 mm
o Filters	Cobalt blue, red free, green & heat - absorbing
o Slit rotation	0* - 180* continuous
 Patient's eye/prisma surface working distance 	
Fixation point	Luminous Flexible
O Chin rest: height adjustmen	t 70 mm
 Surface size 	380 x 500 mm
O Power supply	100-120-230-240V ACV 10%
 Power consumption 	25VA
o Halogen Bulb/LED	6v 20w PG22/LED
 It should be upgraded to pl 	hoto slit lamp and product must be CE/FDA approved. 12v 26mA Red





Auto Ref Keratometer

Radius Curvature:: 5.00~10.00 mm (0.01 mm Step)

Refractive Power:: 67.50~33.75D (n=1.3375) (0.01/0.12/0.25 D steps)

Astigmatism :: 0°~180° (1° Steps)

Peripheral Measurement :: 6.0mm 9r=7.8

PD:: MAXIMUM 88mm

Monitor with colour TFT Display

Printer:: Thermosensitive Printer

Power Supply:: AC 100 to 240 V, 50/60 Hz/100 W

Data Output:: RS 232/USB

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A SCAN

- The Ultrasound A-Scan Bio-meter system with the following specifications:
 - 0 10 MHz Biometry probe with applicator and clinical accuracy of \pm 0.1 mm.
 - Ability to measure axial length between 15 and 39 mm
 - o Should have Built-in contact eye model
 - Should have measurement memory of 10 per eye
 - Should have facility for up to five different users to configure the system to their individual settings
 - Should have five IOL calculations formulas: Holladay, SRK II, SRK T, Binkhorst II, Hoffer Q, and an optional Haigis formula.
 - o Should have the post refractive K adjustment software for patients who have undergone refractive procedure
 - O Should have the facility for inputs and store White to White data of patients.
 - Should have Auto, Manual and Super Auto Modes
 - Should have large 800 X 600 SVGA Touch/Display LCD for easy viewing and adjustable screen brightness
 - O Should have age compensation mode for accurate measurements
 - Should have programmable velocity for each segment
 - Should have computer ready interface
 - O Should have post-refractive K adjustment software.

. Should have CE/FDA Approved. W.

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B Scan

High resolution images with over 2000 samples per line; 0.015 mm inherent electronic resolution.

Zoom control enhances diagnostic capability. Images can be enlarged while maintaining high, undistorted

It should have separate icons for initiating new exams, capturing.

screen snapshots, creating reports, or reviewing exams.

Post processing of images for optimal diagnostic capability: TGC controls; near, mid, and far ranges,

and contrast and image intensity controls.

Unique report generation template simplifies the documentation of exams. Documents can be printed, or transferred via paperless office or email.

Electronic measurement capability with dual digital calipers. Measurements are repeatable to greater than

99% accuracy for purposes of chronological comparison.

Predefined, custom scan settings based on the image being obtained can be saved for later recall.

Adjustable probe pulse power improves ultrasonic penetration capability.

Full motion video loops for seamlessly viewing real-time and captured screen scans.

Patient based file storage is virtually unlimited, limited only by your hardware.

Quick and simple to use software is intuitive and user-friendly. Using the four page quick start guide, you can begin

taking B-scans in minutes without struggling with a cumbersome operating manual.

Sector Scan Angle: 60 degrees.

Resolution: Electronic, 0.015 mm; Clinical, <0.1 mm.

Gray Scale: True 256 shades of gray.

Cineloop Sequence: Adjustable to 512 frames or 34 seconds.

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Transducer Frequency: 12 MHz and 15 MHz.

Depth Selections: 3 cm, 6 cm (12 MHz); 5 cm, 10 cm (15 MHz).

CE FDA

Higher end Surgical Operating Microscope for Ophthalmology

- 1. This should be a high end system with which High resolution view of anterior Segment (Wide angle and high Magnification view) is possible facilitating cataract surgery and recording of the same.
- 2. Main Microscope with motorized zoom: Motorized; 0.4x 2.4x with automatic reset
- 3. Focusing: Motorized with 55 mm travel and automatic reset
- 4. XY Coupling: Motorized with 60 mm movement range and automatic reset Base: 33" x 31" x 10" with 5 dual locking casters
- 5. Illumination: Light source: 12 v 100 w rated at 2,000 hours. Minimum Illuminated field: 1882.9 mm2
- 6. Pupillary distance: 50 mm 75 mm
- 7. Maintains a consistently stable, high quality red reflex regardless of pupil size, centration, lens tilt or patient eye movement
- 8. Unprecedented detail recognition and contrast in every phase of cataract surgery
- 9. Greater depth of focus with an approximately 60 mm longer focal length that maintains equivalent working distance.
- 10. XY Communication system: At-a-glance access to unique parameters, such as XY and focus position Full color, touch screen display for simplified control and customization.
- 11.Programmable wireless/wired foot pedal control.
- 11. XY position: Allows constant confirmation of positioning within the XY field
- 12. Focus position: Enables awareness of excursion point
- 13. True magnification: Useful for evaluating procedures and gaining feedback
- 14. Provides a true 3D stereo assistant scope (Optional).
- 15. 3D ASSISTANT Visualization: Does not take light from surgeon's optical pathway(Optional)
- 18. Allows 180° swivel for positioning convenience
- 19. Features an independent magnification changer
- 20. Objectives: wd=165 mm, wd=175 mm, wd=190 mm or wd=200 mm
- 21. Binocular Tube: 0° 200° or more, inclinable; f=170 mm
- 22. Eyepieces: 10x with widefield telescoping eyecups
- 23. Floor Stand: spring-adjusted articulating arm, Horizontal reach: Arm=47"; End of optics=50" Vertical reach: 28" Rotational angle: 320°
- 24. Speed adjustable for focus, zoom & XY
- 25. Reset of focus, zoom & XY position with a single push of a button
- 26. Saves settings for future use: Pupillary distance, initial focus point, magnification level and
- Mandatory Accessories to be provided along with operating microscope
- 27. It should be possible to attach a CCTV camera in the Microscope for recording and documentation
- 28. Video adapter with c-mount, fine focus, iris and XY adjustment
- 29. Compatible with various single chip, 3-chip and HD systems
- 30. USB functionality for video and still image capture
- 31. Video Recorder and other accessories needed for recording of high resolution video of surgeries through the microscope

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32. 2 sets of Autoclavable Silicone cover for all the adjustment knobs of the microscope

33. Should operate from 110 - 240 V; 50 - 60 Hz.

34, All equipments should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.

35. 2KVA online UPS with 30 min back-up needed.

Additional Offer during Negotiation

1) UV and IR notch fitters with AR coating

2) Sterilizable covers for all knobs - 1 set extra

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OPERATION TABLE HYDRAULIC

1 Description of Function::

1.1 Hydraulic operating Tables are simple tables for performing surgical procedures and it works without electrical power.

2 Operational Requirements::

2.1 OT Table is required for general surgery and should have X-Ray transluscent tops.

3 Technical Specifications::

1. Four section table top with divided foot section

2. Table top should be constructed from a high-pressure laminate to permit x-ray penetration and fluoroscopy

3. All table positioning, i.e., height, back section, lateral tilt, trendelenburg, and antitrendelenburg, except foot and head section should be operated hydraulically.

4. Should have a manual position selector, whose location should be interchangeable between foot and head end

5. The casings on the frame and centre supporting column should be made of hygienic stainless steel

6. Mattress should be radio lucent and suitable for fluoroscopy.

7.Measurements:(all dimensions are approximated to +/_ 10 % variations)

a. Height: 730-1040 mm b. Side tilt: + 15 degrees

c. Back section adjustment: - 15 degrees to 70 degrees d. Foot section adjustment: - 90 to 0 degree, detachable

e. Trendelenburg: 25 degree f. Anti trendelenburg: 25 degree

g. Head section adjustment: -40 to -30 degree, detachable

h. Maximum width: 555 mm

i. Length: 1950 mm

4. System Configuration Accessories, spares and consumables

4.1 System as specified

4.2 Accessories should include

a. Padded arm rest with straps - pair with damps

b. Anaesthesia screen with clamps

c. Side supports: pair with clamps

d. Shoulder supports: pair with clamps

e. Knee crutches: pair with damps

f. X-ray cassette tray

g. Kidney bridge

h. SS bowl with clamps

i. Infusion rod with clamp

5 Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%

5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Power Supply

None

7 Standards, Safety and Training

- 7.1 Should be FDA, CE,UL or BIS approved product
- 7.2 Manufacturer should be ISO certified for quality standards.
- 7.3 Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.

8 Documentation

- 8.1 User/Technical/Maintenance manuals to be supplied in English.
- 8.2 Certificate of calibration and inspection.
- 8.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual.
- 8.4 List of important spare parts and accessories with their part number and costing
- 8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out

OCT

SPECTRAL DOMAIN OPTICAL COHERENCE TOMOGRAPHY

- 1. Features: High definition OCT scans provide precise Features: detail of retinal tissue and pathology.
- 2. 3 D view should be there
- 3. Detailed thickness maps for monitoring disease progression or regression
- 4. Motorized chin rest and alignment of patient image registration for precise rescanning.
- 5. Normative database for Macular thickness and RNFL, Multi Ethnicity with preferably Indian Normative database.
- 6. Macular and RNFL Thickness analysis Macular change analysis. Guided progression analysis
- 7. Type of scans: Macular scan, Optic disk scan, High Type of scans: definition scan
- 8. Scan Speed: Scan sped:26000 A-scans per second or m Scan Speed: ore
- 9. No of A Scans X B scans: 512 A scans x 128 B scans, No of A Scans X B scans: 200 A scans x 200 B scans or better
- 10. Resolution: Axial resolution 5um (in tissue) or bet Resolution: ter
- 11. Transverse resolution:20um (in tissue) or better
- 12. A----scan depth: scan depth: 2.0mm (in tissue) 1000 data points or better
- 13. Fundus Imaging: Live during scanning through Line S Fundus Imaging: canning Ophthalmoscope (LSO) or Scanning Laser Ophthalmoscope or through any better technology
- 14. Field of view: 36 degrees x 22 degrees or more Field of view
- 15. Optical source: Super luminescent diode (SLD), 840n Optical source: m
- 16. Focus Adjustment Range: -20D to + 20D (diopters) or Focus Adjustment Range: more
- 17. Fixation: Internal and external Fixation:
- 18. Pupil Size Requirement: 2. 5-3.0mm or smaller Pupil Size Requirement:
- 19. Computer: Computer: Integrated computer Windows Xp Pro or better
- 20. Multi-core processor
- 21. Internal storage 80,000 scans or better
- 22. CD-RW, DVD-ROM Drive
- 23. Integrated colour flat panel display of 15 inch or better
- 24. Printer: Photo quality Colour Laser Printer to be Printer: provided
- 25. Anterior Segment Imaging: This facility also should Anterior Segment Imaging: be there 26. Accessories: Motorized Table to be provided which c Accessories: an be easily adjustable for height with a hand controlled button provided on the table body itself. Table should be wide enough to accommodate the entire system including computer, printer and other accessories. If necessary separate table to be provided for Computer and other accessories
- 26. Should supply online UPS of sufficient capacity with 30 minutes backup to connect all the equipments supplied.
- 27. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.

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ADVANCED PHACO EMULSIFICATION SYSTEM

- 1. Should have a 4 crystal Hand piece which is slim, light weight and autoclavable.
- 2. Should have the ability to drive high performance four crystal handpiece: 30-40kHz, piezoelectric
- 3. Should have the facility to drive Torsional/Transversal/Longitudnal ultrasound hand piece or any other equivalent advanced technology

4. All hand pieces should be compatible with tips like standard. microtip and Curved / Bent tip.

Flared and aspiration bypass tips

- 5. Should have facility of ultrasound power control in various sub modes like continuous, pulsed, burst and bi-modal application
- 6. Should have a modality of hyper pulses from 1 to 40 pulses/sec or more with selectable variable on and off time
- 7. Should have micro burst setting range from 5 ms to 500ms.
- 8. Should have the facility to use vacuum level of upto 500 mmhg or better and aspiration flow rate upto 50 cc/min or better.
- 9. Should have facility of dynamic rise time
- 10. Should have the facility of Custom Pulse where in on time and off time can be varied simultaneously with the foot switch depression, with decreasing and increasing on time setting and decreasing off time settings variables.
- 11. Voice confirmation during mode changes
- 12. Automated IV pole, controlled via footswitch, remote control and front panel
- 13. Should have an ability to drive pneumatic Guillotine cutter for anterior Vitrectomy with cut rates up to 700 cuts or more per minute with 23 gauge Vitrectomy probe
- 14. Should have a wireless remote control
- 15. Should have a programmable footswitch
- 16. Should have an adjustments for footswitch to accommodate for varying lengths of the foot
- 17. Flat screen, Colour LCD display with touch screen, tiltable and rotable
- 18. Bipolar coagulation capability Accessories to be provided in addition to the Standard accessories
- 19. Phaco handpieces confirming to the specs mentioned earlier -2 Nos
- 20. Phaco tips, Curved or bent tip and other tips 10nos
- 21. Anterior Vitrectomy packs including cutters and other disposable 10 nos
- 22. Cassettes/Tubings and other such disposable needed 10 sets
- 23. Stand/Table with wheels for the Machine on which it can be kept and moved around
- 24. Should operate from 200 to 240Vac, 50 Hz input supply
- 25. All equipments should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.

Additional Offers during Negotiation
1) Training for 2 surgeons

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- I Additional Accessories Offered
 1) Phaco Sleeves Pak (2.8mm): 15 nos
 2) Disposable Cassettes: 40 nos.
 3) Bi-Manual I / A Set: 1 nos

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Direct Ophthalmoscope

Hand Held Direct ophthalmoscope with LED replacement Lamp.

Rechargebale handle which can be directly pluuged in AC supply for recharging

Bayonet fitting for fast and secure attachment to the handle.

Glass-fibre reinforced casing, particularly sturdy, light-weight and durable.

Simple exchange of the lamp at the base of the instrument head.

Corrective lenses for 89 diopter values

Plus 1-45 in single steps

Minus 1-44 in single steps

Easy-to-operate aperture hand-wheel with six apertures

• semi-circle, small/medium/large circle, fixation star, slit and grid

Includes filter wheel engageable for all apertures with

• symbol display, red-free filter, blue filter and polarization filter

Focussing device with zero retention force for the quick correction of ametropias.

Each set to be provided with

1 x Original Manufacturer Hard Plastic case

1 x Original Rechargebalbe battery and

10 pcs x Original Spare bulbs

The equipment should be CE Marked.

Indirect Ophthalmoscope

- Binocular Indirect Ophthalmoscope with precision viewing upto 1.0 mm pupil size.
- Spot size: 3 integrated spot size small spot, medium spot and large spot.
- Filters: 4 integrated filters to choose from red filter, cobalt blue filter, yellow filter and diffuser.
- Vertical adjustment, +/- 4°
- Integrated flip up adjustment optics which can be flipped and locked at 0°, 12.5°, 47.5°, 60°.
- Aperture and filter adjustment levers: can be locked to the desired position required.
- Locking apertures and filter adjustment (Safety clutch): protect mechanism from the forced adjustment while in the lock position.
- P.D. Range from 46-74 mm.
- 6V Halogen Xenon Bulb or LED.
- Teaching Mirror.
- Rechargeable Li-ion battery transformer with LED indicator
- Desk Top-cum- Wall Transformer.
- Transformer compatible with voltage system of AC 220- 240 Volts.
- Large & small depressors
- · Carrying case
- + 20D lens.

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Retinoscope.

Hand Held Streak Retinoscope with 3.5 V LED.

Rechargeable handle which can be directly plugged in AC supply for recharging Simple operation with knurled thumb screw. The line and spot image can be focused with the operating element and turned 360°, and scale/angle should be read off the integrated scale.

Holder for hanging and fixing the fixation card into position for dynamic retinoscopy

Two fixation cards supplied. The patient's eye can adjust optimally to the

distance to the retinoscope.

Integrated eyeglass protection.

Bayonet fitting for fast and secure attachment to the handle.

Dust-tight, very sturdy and light casing made of impact resistant plastic.

Simple exchange of the lamp at the base of the instrument head.

Each set to be provided with

1 x Original Manufacturer Hard Plastic case

1 x Original Rechargeable Li-ion battery and

2 x fixation cards for dynamic retinoscopy

10 pcs x Original Spare LED

The equipment should be CE Marked.

Senior Reside

TONOMETER NON CONTACT

- 1. Should be air puff con-contact type to measure IOP without actual eye contact.
- 2. Should have digital display of IOP.
- 3. Should have a minimum measuring range from 0 to 59 mmHg.
- 4. Should have an accuracy of ± 1 mmHg.
- 5. Should have coronial response technology.
- 6. Should have inbuilt printer.

7. Should work with input 200 to 240Vac 50 Hz supply.

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Eye Surgical Tools

S	l.No.	Surgical Instruments	QTY.
٦	1	Lid Retractor	2
	2	Eye Speculum	2
	3	Conjunctival fixation forceps	_ 1
		•	1
	4	Plain Forceps	1
	5	Wire Vectis	1
	6	Corneal Forceps	1
	7	Corneal Scissors	1
	8	Scissors-Straight & Curved	1
	9	Vannas Scissiors	1
	10	Iris Forceps	1
	11	Vitreoretinal Microscissors	1
	12	Micro Forceps	1
	13	De-Wecker's Scissors	1
	14	Iris repository	4
	15	Two Way irrigation aspiration cannula 23 Gauge	1
	16	Entropion Clamp	1
	17	Entropion Plate	1
	18	Chalazion Clamp	1
	19	Chalazion scoop	2
	20		2
	21	Enucleation Scissiors	2
	22		1
	23		2
	24		4
		5 Lacrimal Cannula	2
		Squint Hook	2
		Suture typing forceps	2
		28 Corneal needle Holder	1
		Needle Holder(Barraquer)	1
		30 MC Pherson's Forceps	1
		31 Lens Dialer 32 Bone Nibbler	1
			2
		33 Lacrimal Sac dissector 34 Caliper	1
		35 Artery Forceps(Mosquito)	1
		36 Container with two trays	1

- The Instrument and Container should be Imported and CE or FDA approved.
- The Instrument and Container should be of the same parent company.
- The Sterilisation containers should be imported and of CE or FDA certified.

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- Copy of the CE certicate or FDA certificate must be enclosed
- The sterilisation container and accessories should be of the same parent company.
- The Sterilisation containers should meet the international standards
- The Sterilisation Containers should offer superior filtration efficiency of 99.9997%.
- It should have an indicator wherein colour green means the container is "sterile" and when the container is opened, the indicator should automatically change to red colour indicating "unsterile"
- It should have reusable microbial barriers instead of disposable filters. The
 microbial barriers should be easy to remove and clean.
- It should have lateral flow ducts at the top for flow of air.
- The instruments should remain sterile in the container and the container should be capable of being brought into the Operation Room without any essential packaging.
- It should also consist of tray and silicon matt (for micro instruments).

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Operating Microscope Ophthalmic (Basic)

TECHNICAL SPECIFICATIONS

- 1. Should have apochromatic optics
- 2. Should have continuous zoom with 4x to 20x.
- 3. Should have working distance of objective lens F = 200 mm
- 4. Eye piece should be minimum 10x or 12.5x wide
- 5. Should have XY coupling
- 6. Should have red flex switching in/out facility
- 7. Should have 45 degree binocular with converging optics.
- 8. Should have total magnification from at least 4.5x to 22x
- 9. Should have field of view from at least 15mm to 50mm
- 10. Should have cold light coaxial illumination by fiber optic light guide
- 11. Should have tools free design for stand-by bulb change over and for failed bulb replacement.
- 12. Should have heat absorbing and UV filters.
- 13. Should be floor standing type with fiber wheels with brake.
- 14. Should have a minimum vertical stroke of 400mm
- 15. Should have rust free stand.
- 16. Should be operated in 200-240 Vac 50/60 Hz input supply.
- 17. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.