

## SPECIFICATIONS FOR MICROSCOPE BINOCULAR

1. Body: Binocular, sturdy, stable base body with focus adjustment controls.
2. Eye piece: Paired, high quality, (the image of the object as seen through the binocular eyepiece
3. should be well defined centrally in at least 2/3 field of view), achromatic, wide field, 10x with inbuilt pointer. The eyepiece should be aplanatic and have a minimum field number of 18 Diopter adjustment must be present on one/ both eye pieces or on the eye piece tube.
4. Optical system should be infinity corrected.
5. System complete with illumination system is required.
6. Objective: Three objectives 10x, 40x, 100x. 10x and 40x objectives should have numerical apertures of 0.25 and 0.65 respectively and should be of spring-loaded type or otherwise. 100x should have numerical aperture of 1.25 and should be of oil immersion and spring-loaded type. Suitable prominent marking should be provided on 100x for easy identification. Unbreakable containers to be provided for storing the objectives. All objectives should be wide field, achromatic and parfocal.
7. Marking for the Objectives: Each objective should be engraved with the following
8. Magnification and numerical aperture, for example, 10x/0.25
9. 100x objective should be engraved with the word 'Oil' in changing from one objective to another or reintroducing the same objective by rotation of the nosepiece, the object at the center of the field should not appear displaced by more than 0.02 mm in the object plane in any direction.
10. Nose piece: Revolving nose piece to accommodate a minimum of three objectives with click stops. It should be provided with ribbed grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment. Extra ports if any should be fitted with dust proof metallic/ebonite caps.
11. Stage uniformly horizontal, mechanical stage having dimensions of length 140 mm (+/- 20mm) with fine vernier graduations (minimum reading accuracy of 0.1 mm). The stage should be provided with spring loaded slide holder for exact positioning of specimen/ slide. It should be designed with convenient sub-stage vertical coaxial adjustment for slide manipulation. The stage should have ball-bearing arrangement to allow smooth travel in transverse directions i.e. 80 mm (+/- 5mm) and front to back direction, 50mm (+/- 5mm).

12. Sub-stage condenser: Abbe-type condenser, numerical aperture (N.A.) 1.25 focusable with rack and pinion arrangement incorporating an spherical lens and an iris-diaphragm. The condenser should have a filter holder and removable/ swing in/ out blue filter (suitable for bright field Microscopy).
13. Sub-stage illuminator:
14. The system should have a built-in variable light source (Illuminator). This light source should have a 20 W, 6 V Halogen lamp. The circuitry for the light source should include a constant voltage supply.
15. The system should be provided with a step-down transformer and an on-off switch and intensity control. The lamp should be provided with a lamp socket that has the facility for easy replacement
16. of the bulb,
17. Power supply: Voltage 220 V AC, 50Hz. Should have one on-off power switch, 3 core power cord
18. with a 3-point male plug.
19. The system should have an inbuilt protective/ safety device to withstand fluctuations of voltage
20. from 140 V to 280 V.
21. A plano-concave mirror in fork mounting should be supplied which would be attachable to the base for field use when power is not available.
22. The fuse for the halogen lamp should be easily accessible to the operator
23. The Illuminator should have a build-in field diaphragm for Kohler illumination.
24. Eyepicetubes: Binocular eyepiece tubes, inclined at 45 degrees, rotatable through an angle
25. of 360 degrees, having aninter-pupillary distance range of 54-74 mm or wider, covering the above
26. mentioned range.
27. Focusing knob: Co-axial coarse and fine focusing knobs capable of smooth fine focusing movement over the full range of coarse travel. The fine focusing movement should have a sensitivity of two
28. microns or less (finer) over the entire course focusing stop safety arrangement should be provided.
29. General: All optical parts including objectives, eyepieces, and prisms should have ananti-reflective coating which also gives ananti-fungal property.

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30. All metallic parts should be corrosion-proof, acidproof, and stain-proof.
31. Working manual should be provided with each microscope.
32. A bottle of at least 25 ml immersion oil, a roll of lens tissue paper, and lens cleaning solution (100 ml) should be provided with each microscope.
33. One anti-static cleaning brush should be provided with each Microscope for cleaning purposes.
34. Microscope should be supplied with all spare parts including Fuses – 6 Nos.
35. All consumables required for installation and standardization of system and microscope coverareto be given free of cost.
36. The unit shall be capable of being stored continuously in the ambient temperature of 0 - 50 deg C and relative humidity of 15-90%.

**Conditions for tender:**

1. All accessories should be from the same Original Equipment Manufacturer for the main unit.
2. Instruments must be ISO certified and a copy should be enclosed. (The ISO Certificate must be issued by any organization accredited by the Bureau of Indian Standard or accredited by the international accrediting forum "IAF" (Certificate to be attached).
3. Should be USA FDA and European CE be approved by 4 digits notified body.
4. Other necessary certifications if any required will be provided by the bidder for the smooth functioning of the machine.
5. Installation process should be performed by O.E.M trained service engineers/ service representatives on OEM letterhead or Service Report within 15 days of supply, with the mandatory provision of providing preventive services visit of OEM trained Service Engineer/ Service Representative quarterly per year till the completion of warranty period (i.e., 20 visits for the first 05 years) & further quarterly visits (04 visits/year) year till the completion of CMC period.
6. The equipment should have a Brand name/ Model Number embossed/etched on the equipment.
7. Certificate of calibration and inspection from factory.
8. List of important spare parts and accessories with their part number and costing.

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9. All the technical specifications in the compliance statement must be supported by Original Literature from the firm/ O.E.M with highlighting Numbering & flagging of all technical certificates.
10. Offered Equipment should have a strong Government Installation base.
11. Offered Equipment should have a Regional Sales Service Centre of the Original Equipment Manufacturer in the region for a 95 % uptime guarantee.
12. For the offered main unit, the essential, optional required consumables'/accessories' shelf life should be declared on the Original Equipment Manufacturer's letterhead.
13. In case of technical snag/failure/breakdown the response time for the inspection should be within 24 hours and repair within 05 days otherwise provide a service machine/ alternate arrangement to be made till the period of recovery of the breakdown of the unit, failing which attracts penal action as per the decision of institute/ hospital.
14. For offered equipment the Training of technical staff and users should be performed by Original Equipment Manufacturer trained Service Engineers at the proper designated place- at bidders' cost.
15. Company should quote their latest model and need to provide an affidavit for the same.
16. As a tendering process the Demonstration of the offered Equipment is Mandatory at hospital/institute premises or other designated places at the bidder's cost.
17. The bidder must comply with the General Financial Rules and their modifications if any issued by the Government of India- 2017.
18. Any bidder from a country that shares a land border with India will be eligible to bid in the tender only if the bidder is registered with the Competent Authority (i.e., Registration certificate issued by the Ministry of Commerce and Industry (Department for Promotion of Industry and Internal Trade- DPIIT after October 2020). If any such bidder is not registered with DPIIT they will be liable for technical disqualification.
19. Principal (OEM) must authorize only one agent to be quoted in the bid otherwise multiple quotes through different agents in the same bid will be canceled.
20. The Bidder and its OEM both have to submit a notarized affidavit on the Indian Non-Judicial Stamp Paper of Rs.100/- that the bidder has not quoted the price higher than the current financial year and last financial year supplied to any government Institute/ Organization/ reputed Private Organization. OEM also has to submit that the price quoted by the bidder in the bid is on its behalf and the lowest in the current and last

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financial year in the country. Therefore, if at any stage it has been found that the supplier and its OEM have quoted lower rates than those quoted in this bid; the Institute (the purchaser) would be given the benefit of lower rates by the Supplier and any excess payment if any, will become immediately payable to the Institute (the purchaser). If such an affidavit is not submitted, the bid will be outrightly rejected. (Part of technical bid).

21. Guarantee / Warranty Period: Separate offers of Comprehensive Maintenance Contract (CMC on main equipment) and Annual Maintenance Contract (AMC on main equipment) for further 5 years after expiry of 5 years of warranty (i.e., 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> years) in rupees only (and on basis of percentage of price) should be included in a financial bid in the absence of which the offer is liable to be rejected. Payment for CMC/AMC shall be made only after the expiry of the warranty of 5 years, in case the Institute (the purchaser) decides for availing of CMC/AMC services. Contract for CMC/AMC shall be decided on expiry of warranty but rates (not more than 5% inclusive of all taxes for 6<sup>th</sup> to 10<sup>th</sup> year) will be frozen at the price of an issued purchase order before the release of payment by the Institute (the purchaser). However, the Institute (the purchaser) may decide not to enter into any CMC/AMC contract without assigning any reason for the same, which shall be binding upon the bid.

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