



E-Procurement Global Tender No. STR–D3/NIMHANS/2019-20/IND553 05.12.2019

**GLOBAL TENDER NOTIFICATION
(Through e-procurement portal only)**

The Director, NIMHANS invites tender from eligible tenderers through the Karnataka Government E-Procurement portal for supply of following **EQUIPMENT**.

Sl. No.	Name of the Item	Quantity (in Nos.)	EMD (in ₹)
1.	MOBILE NEURONAVIGATION	01	2,00,000/-

Tender Schedule

Downloading of Tender documents from website - https://eproc.karnataka.gov.in/eportal/index.seam	From 05.12.2019 Onwards
Last date for tender enquiry	17.12.2019 upto 11:00 AM
Tender submission last date and time	04.01.2020 upto 11:00 AM
Technical bid will be opened online by the authorized officer on	05.01.2020 at 11:00 AM

Sd/-,
Director

TENDER DOCUMENT
Terms and conditions

1. The bid documents for the above item should be addressed to “The Director, National Institute of Mental Health & Neuro Sciences, Post Box No. 2900, Hosur Road, Bengaluru – 560 029, Karnataka, India” and should be uploaded in E Procurement portal only on or before the due date.
2. The TENDER BID should be valid for **four months** from the due date. **NIMHANS, Bengaluru will not take any responsibility for any technical issues.**
3. **Earnest Money Deposit (EMD):**
 - 3.1. The (EMD) shall be denominated in Indian Rupees [₹] and should be paid in the E-PROCUREMENT PORTAL as per the facility provided.
 - 3.2. The EMD shall not bear any interest and will be refunded to
 - a. successful tenderer on receipt of Agreement and Bank Guarantee.
 - b. unsuccessful tenderer upon finalization of tender bid and award of tender to successful bidder.
 - c. all the tenderers if the tendered item is cancelled or retendered.
4. The tender documents and all correspondence’s relating to the bid should be in **English language only.**



5. Technical bid should comprise of (uploaded copy of documents should be self attested, stamped and better quality – preferably .PDF format) -
- 5.1 Brochure/Catalogue and Data sheet of the equipment.
 - 5.2 Technical Compliance Statement
 - 5.3 Proprietary certificate from the manufacturer mentioning the unique technology or feature/s mentioned apart from the brand name (If applicable).
 - 5.4 Pre requirements required at the installation site (Before submitting the bid, the tenderer should make pre-visit to the installation site and indicate the requirement along with the price bid wherever necessary)
 - 5.5 Delivery Period of the item to be supplied and Time required for installation from the date of purchase order has to be indicated.
 - 5.6 List of Institutes where the equipment has been supplied with copy of purchase orders.
 - 5.7 Copy of GST, PAN, TIN document
 - 5.8 Whether tenderer is manufacturer / accredited agent / sole representative, indicate details of principal's name & address. The offers of tenderer who are not manufacturer or direct authorized agent will be summarily rejected. Sub- distributors will not be accepted.
 - 5.9 Non – blacklisting certification that the firm has not been blacklisted in the past by any government/Private institution and certification for No Vigilance/CBI case pending against the firm/supplier by making an affidavit on non – judicial stamp paper of ₹100/-.
 - 5.10 Declaration towards acceptance of all terms and conditions should also be provided.
6. Financial Bid should comprise of-
- 6.1. Quotation should be only for DAP i.e. NIMHANS Door Delivery Price inclusive of main equipment cost, each article wise/spares rates, taxes, other Government levies, Customs duty, any local agency commission, transportation, delivery of the equipment to the Institute premises, installation and commissioning, etc. with a detailed break up mentioning manufacturers name, License number and name of the brand/make. Tender bids without price bid/quotation will be rejected. **CMC COST SHOULD BE QUOTED IN INR ONLY.**
Detailed breakup of the cost should be provided under icon “Action column” by clicking the % symbol which will be mentioned as Added statutory components.
 - 6.2. The tenderer should also quote 5 years CMC cost for the post warranty period in INR under Action column in E procurement portal but CMC cost will not be considered for successful tenderer decision.
 - 6.2.1 In case of Import, Customs Duty will be considered only at 5.50% of the total Purchase order value and the required Customs clearance documents will be provided by NIMHANS on prior intimation (atleast 5 working days prior intimation) of shipment along with details and relevant documents from the supplier.
 - 6.2.2 If the tenderer is quoting in Indian Rupees (INR) for items NOT MANUFACTURING IN INDIA (NMIC), the CUSTOM DUTY EXEMPTION



CERTIFICATE WILL NOT BE ISSUED BY THE INSTITUTE. The Rate quoted should be inclusive of Custom duty & other incidental charges.

7. Successful tenderer decision will be made on the basis of **total cost of the equipment (Inclusive of all miscellaneous charges as mentioned in Clause 6.1) + 5 years CMC cost for the post warranty period (i.e. for 6TH to 10th year).**
8. The cost of the “**MOBILE NEURONAVIGATION**” will be freezed for 1 Year from the date of purchase order; however Institute reserves the right to procure/reject the purchase of equipment with the successful tenderer on repeat order basis within 1 year from the date of purchase order.
9. The tender bids (technical and price bid) should be typewritten; every correction in the tender should be initialed along with seal by the tenderer, failing which the tender will be rejected. All pages of the bid submitted must be signed along with seal and sequentially numbered by the tenderer.
10. **Evaluation of Bids:-**

The technical bid of the tenderer will be evaluated to determine whether

 - a. They are complete with respect to specifications.
 - b. They are free from computational errors.
 - c. The requisite documents have been submitted and properly signed.
11. **Tender Opening:**
 - a. The Technical bids will be unlocked through E procurement portal in the Committee Room, Adjacent to Registrar Chamber, NIMHANS, Bengaluru on the date specified in presence of tenderers or their representatives who choose to attend.

The Tenderers' or representatives who are present shall submit authorization letter along with copy of Photo id proof and shall sign a register evidencing their attendance.
 - b. The Financial bid of the technically qualified tenderer/s only will be opened on a notified date.
12. Equipment and its accessories should be covered with **minimum warranty period of 5 years** for normal or regular wear & tear from the date of complete installation (Ready to use in all respects). In case of software's, the validity of the license key should be clearly mentioned and should have user define provision with option to switch over from one system to other system of the same kind within the validity period.
13. Supply of spares should be guaranteed for a minimum period of 10 years from the date of supply or from the date of cessation of production of the model for 10 years, whichever is later, at the rates prevailing against payment.
14. Any modification or revision of bids after submission will not be entertained under any circumstances. Conditions such as “subject to the availability of stocks”, supplies will be made as and when supplies received from the principles etc., will not be considered under any circumstances.



15. A tenderer having once given a tender bid shall not withdraw it after its acceptance/opening and if does, the EMD paid by the tenderer will be forfeited and the tenderer is liable to make good the loss sustained.
16. If required, the tenderer should demonstrate the quoted model of the equipment at the institute during the technical evaluation, failing which their bid/offer shall be rejected. The tenderer will be intimated that they should get ready for demonstration. No request for extending time for demonstration will be entertained. Failure to demonstrate, their offer will be rejected.
17. The tenderer should supply the circuit diagram and instruction manual of the tendered equipment/s at the time of supply of the equipment.
18. Necessary training / instructions on operation of the system should be given by the qualified engineers of the tenderer firm to NIMHANS technical staff/s at free of cost after completion of the installation.
19. The successful tenderer should immediately submit an acceptance letter duly signed and sealed for the rate/s and offers agreed by both the parties to the Head of the Institution within reasonable time on receipt of the Purchase Order (Agreement Specimen will be enclosed with Purchase order & Stamp duty to be paid by the tenderer). The successful tenderer should also furnish a Bank guarantee only from a Nationalized bank to the extent of 10% of the total purchase order value, valid for 60 days beyond the completion of the warranty period of the equipment, no split period bank guarantee will be entertained.
In the event of the successful tenderer failed to supply the item/execute the agreement/submit the Bank Guarantee the EMD deposited by them shall stands forfeited.

20. Payment terms:

- 21.1 Payment (NEFT / RTGS / Wire transfer / LC) will be made only after good working condition of the equipment certified by the end user. **NO ADVANCE PAYMENT WILL BE ENTERTAINED.**
- 21.2 In case of foreign payments made by Letter of Credit (LC) or wire transfer, bank incidental charges within India will be borne by the Institute and outside India should be borne by tenderer.
- 21.3 Any amendment or extension of LC sought by the tenderer thereafter should be borne by the tenderer.

21. Uptime Guarantee:

Penalty Clause for non-functioning of equipment in term of hardship to the patients and financial loss to institute: 95% up time of 365 days (24 hours a day) that is from the day of successful handing over of the whole complex. The company takes the responsibility for the functioning of all the components and equipment, including the third party items supplied and included in the project. The total downtime annually for any reason/involvement of any of the components cannot exceed 5% (all inclusive). Subsequently if downtime exceeds 5% of 365 days, 1% of PO Value will be levied as penalty for every 24 hours of downtime until 7 days from the day of breakdown. If downtime exceeds 7 days the penalty will be 2% of PO Value from the date on



- which the equipment broke down beyond 5% permissible downtime. In addition to this, warranty period will be extended at double the rate of the downtime period.
22. If, at any time, during the said period, the supplier reduce the said prices of such Materials/Equipment or sales such Materials/Equipment to any other person/organization/ Institution at a price lower than the chargeable, the company shall forthwith notify such reduction or sale to the Director, NIMHANS and the price payable for the Materials supplied after the date of coming into force of such reduction or sale shall stand correspondingly reduced.
 23. The losses to NIMHANS, Bengaluru, if any incurred on account of purchase made elsewhere by failure, neglect or refusal on the part of the tenderer to supply according to the terms of agreement will be recovered from them. If any article or things supplied by the tenderer have been partially or wholly used or consumed in the hospital and they are subsequently found to be in bad condition, unsound, inferior in quality or description, not in accordance with samples or otherwise faulty or unit for use, the wholesome of the contract price or price of such articles or things will be recovered from the tenderer. The tenderer will not be entitled for any payment whatsoever, for such articles for infringements of the stipulation of the conditions or for justifiable reasons the contract may be terminated by the Director and the tenderer shall be liable for losses sustained by the NIMHANS on the consequences of the termination which may be recovered from the EMD/Bank Guarantee or from their invoices due to them. In the event of such amount being insufficient, the balance will be recovered personally from the tenderer.
 24. Any corrections/changes in the tender will be uploaded as corrigendum in the NIMHANS and E procurement websites only.
 25. If the tender last/opening date falls on any general/government/institute holiday(s), then the successive dates will be postponed by equivalent days of holiday(s), however the time remains unchanged.
 26. The Director reserves the right of ordering/not ordering/cancelling/increase or decrease the quantity and to reject any or all tender quotations without assigning any reason. The decision of the Director, NIMHANS, Bengaluru, shall be final in all the controversies that may arise in the matter. Any dispute arising out of this will be subject to the jurisdiction of the Court in Bengaluru.
 27. Failure to adhere any of the above terms and conditions the bid(s) may be rejected and EMD may be forfeited.
 28. None of the terms and conditions of the supplier shall be applicable to the purchase contemplated hereunder, irrespective of it being attached to any documents to be provided to NIMHANS. Such exercise shall have no meaning and binding effect unless the same is accepted by NIMHANS in writing.

NOTE: Please keep checking the NIMHANS and E-Procurement websites regularly for any further updates.

Sd/-,
Director



DECLARATION
(TO BE GIVEN BY THE TENDERER)

Name of the Item : MOBILE NEURONAVIGATION
Name of the company :

To

The Director,
National Institute of Mental Health & Neurosciences
(Institute of National Importance)
Post Box No. 2900,
Hosur Road, Bengaluru – 560 029

Dear Sir,

1. I/We hereby submit my/our tender for the
2. I/We have made requisite payment against EMD as per the tender document vide reference No. & date, else my tender bid may be rejected.
3. I/We have gone through all terms and conditions of the tender documents before submitting the same.
4. I/We hereby agree to all the terms and conditions, stipulated by the NIMHANS, in this connection including delivery, warranty, penalty etc. Quotations for each group are being submitted and shall be considered on their face value.
5. I/We undertake to sign the contract/agreement, if required, within reasonable time from the date of issue of the letter of acceptance, failing which our/my security money deposited may be forfeited and our/my name may be removed from the list of suppliers at the NIMHANS, Bengaluru.

NOTE: ALL TERMS & CONDITIONS SUCH AS TAXES/LEVIES ETC, HAS BEEN INDICATED IN THE QUOTATIONS FAILING WHICH IT WILL BE PRESUMED THAT THE RATES ARE INCLUSIVE OF ALL TAXES/LEVIES AND OTHER TERMS AND CONDITIONS ARE ALSO AS PER YOUR REQUIREMENTS.

Yours faithfully,

Signature of Tenderer & seal



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**CHECK LIST
(TO BE FILLED BY THE TENDERER)**

1	Name & Address of the Tenderer		
2	Name & Address Of the Manufacturer		
3	Name of the Equipment & Model Quoted	MOBILE NEURONAVIGATION	
4	Validity of the Quotation	Four months from the due date	
5	a. Delivery Period b. Warranty Period c. Installation Period	5 years	
6	Tender Bid details (Yes or No against each item)	a. Application Fee submitted	
		b. EMD submitted	
		c. Brochure/Catalogue uploaded	
		d. Technical Compliance Statement	
		e. Manufacturer Proprietary certificate uploaded	
		f. Pre requirements details uploaded	
		g. List of users uploaded	
		h. Copy of GST/PAN/TIN & Bank details uploaded	
		i. Distributor authorization letter uploaded	
		j. Non-blacklisting certification uploaded	
		k. Declaration enclosed	
		l. Equipment Door delivery cost quoted	
		m. AMC & CMC cost for 5 years post warranty period	
8	Training will be provided (Yes or No)		
9	a. Whether after sales, service is available in Bengaluru? If yes, quote		
	b. What is the arrangement for post contract / warranty monitoring of the equipment?		
10	Details of the EMD Submitted (Reference no., date & bank details)		
11	Any Other Information (Enclose separately in letter head – Yes or No)		

Signature of Tenderer along with seal



For Technical Clarifications contact:

Dr. Malla Bhaskara Rao, Prof & Head – Mobile: - +91-80-9480829600

Office Landline: +91-80-26995403/05

Dept. of Neurosurgery, Faculty Building, NIMHANS, Hosur Road, Bengaluru

Email ID: bhaskar@nimhans.kar.nic.in brmalla@gmail.com & surgery.nimhans@gmail.com

SPECIFICATIONS FOR MOBILE NEURONAVIGATION SYSTEM FOR CRANIAL & SPINAL APPLICATION WITH INTEGRATION OF EXISTING SERVER BASED PLANNING SOFTWARE INSTALLED AT NIMHANS

1	Navigation Platform <ol style="list-style-type: none">1.01 Navigation system should be easy to set up and should work under Windows/Linux/Unix operating system environment. The system should be plug n play and system software should be user friendly wizard guided to control set up, registration and navigation procedure1.02 System should have Optical and advanced wireless passive marker tracking technology1.03 The system should have touch-sensitive screen and could be used in sterile field. The display should be of Full HD resolution (1920X1080) with screen size of 21 Inch or more.1.04 It should have Rapid data transfer directly to the navigation station with USB 3.0 port for direct data import and also have direct and seamless integration with the hospitals PACS system1.05 The system must have dynamic referencing so that registration is not lost even if the camera or patient moves.1.06 It should have separate mobile cart for the camera stand for flexible positioning and laser pointer for easier positioning & aiming. The mobile stand for the camera should be telescopic with pneumatic braking to take care of line of sight issues1.07 It Should be HIPPA compliant including authentication, accountability log and automatic log-off features1.08 The navigation system should be operable without keyboard or mouse1.09 Optical camera should have a large tracking volume for flexibility in positioning and addressing line-of-sight issues.1.10 System should have RAM of 8 GB & 240GB SSD for fast performance1.11 System should have high end processor like i5 or equivalent with SSD 240GB, and min 2GB Graphics1.12 System should have feature of screenshot for documentation1.13 System should have video Input and output ports for external device integration e.g. Ultrasound, C-Arm and Microscope
2	Electromagnetic Module <ul style="list-style-type: none">• Software should offer electromagnetic navigation in neurosurgical procedures with a Field size of atleast 50X50x50 cms• Software should have a interface designed for intraoperative touchscreen control



	<ul style="list-style-type: none">• Software offers Real-time tracking and visualization of a pointer and up to 4 instruments simultaneously in various views• Software should have a Pointer remote control for setup and registration workflow, freeze functionality, trajectory planning and screenshot documentation• Software should have Animated workflow guidance for easy setup and instrument calibration• Software should Support free positioning of field generator in supine, lateral, prone, sitting and three quarter position• Software should also have Flexible patient referencing to provide positional independence• Software should be able to select; load and save patient data before surgery at any time during surgery• Software should have Interactive display of patient data including zoom and windowing adjustment• System should have wired electromagnetic standard instrument for unsterile patient registration that can be used in both anatomical landmark and surface matching registration• System should have wired electromagnetic sensor for flexible patient referencing• Should provide disposable wired electromagnetic standard instruments for patient registration and navigation suitable for 200 surgeries or a set of disposable instruments set for 200 surgeries should be provided• Should have facility to integrate third party instruments-required adapter size should be for small, medium, large, extra-large, conical and for cylindrical instruments.• The data sheet of disposables should clearly indicate the number of times it can be used and the manufacturer should provide a written undertaking to that effect as well so that the disposables are only used the actual number of times they are approved/intended to be used
3	<p>Integration with existing Server Based Planning Softwares Installed at NIMHANS</p> <ul style="list-style-type: none">➤ The navigation system should have seamless integration with the existing server based cranial planning installed at NIMHANS with atleast 3 concurrent licenses and the users should be able to plan for their cases simultaneously from their office room.➤ The below mentioned Softwares installed in the Server at NIMHANS should be integrated with the navigation system <ul style="list-style-type: none">• <u>Stereotaxy planning</u><ul style="list-style-type: none">➤ It should be able to do Stereotactic localization of any FDA approved Frame- Integrated module for data transfer of DICOM images➤ -View and Alignment task incl. import of non-DICOM images➤ -User defined workflow enables planning in unlocalized data➤ -Planning of multiple trajectories via definition of target and entry point➤ -Regional zoom function in 2D/3D and grey level windowing➤ -Multiple distance and angle measurements➤ -Plan content management with calculated volume information of 3D objects➤ -Fast visualization of volumetric information (data + objects) in axial, coronal, & sagittal planes



and multiple reconstructions

- -Screenshot function for documentation incl. export to PACS
- -Manual modifications and fine-adjustment of arc settings
- -Automatic calculation & PDF print out of specific arc settings
- -Planning data compatibility enables frameless, stereotactic procedures navigation systems

• **Atlas segmentation Software:**

- The Software should have the following features
- -Software should offer Automatic segmentation of anatomical cranial organs for the fast delineation of the anatomical structures eg Brain stem, Hippocampus etc
- -It should provide Schaltenbrand/Wahren Atlas based segmentation

• **Automatic Image fusion Software**

- The Software should have the following features
- -Software should offer Automatic Image fusion of the CT, MR, DTI, BOLD,PET, fMRI & SPECT images
- -The software should offer automatic image fusion for Cranial and Spinal navigation procedures

• **3D viewing Software:**

- The Software should have the following features
- -Both the Planning and navigation software should have the functionality of doing advanced 3D Visualization, with vessel segmentation, Cut &Crop ,functionality, Planar view, Bone/Vessels (+ Skin Overlay) view, Cerebrum(+Skin Overlay) view, Cerebrum (+ Bone Overlay)view, Maximum-Intensity-Projection view, Digital Radiography view
 - Superimposition of 3D image and surgical plan data (objects, trajectories, labeled points)
- -Flexible creation of plan data (trajectories, labeled points) in 2D planes or 3D image
- -Cut and crop functionality to adjust 3D image

• **Tumor marking Software:**

- -Powerful drawing tools for fast and convenient update to anatomical images and contours
- -Quick update of Automatic Segmentation results
- -Interactive modification possible at any time - speeds up contouring and treatment planning
- -Fast target delineation by adjustable threshold-based detection algorithm
- -Automatic linear interpolation between slices
- -Immediate and automatic identification of object boundaries
- -The software should have the capability to paint the targets and adapt to the complex 3D structure of the lesion/ object/ landmark so that it becomes quick & time saving to outline the object during pre-operative & intra-operative planning



	<ul style="list-style-type: none">• <u>Fibertracking Software</u><ul style="list-style-type: none">➤ The Software should have the following features➤ -Automatic import of DICOM DTI data<ul style="list-style-type: none">- Fully automated DICOM DTI Data Preprocessing including De-noising, Motion- and Eddy Current Correction➤ -Initial definition of multiple regions-of-interest with different methods➤ -Intuitive user interface for manual adjustment of tracking parameters➤ -Fully Automatic detection of diffusion directions for up to 255 direction series➤ -Calculation of fractional anisotropy (FA) map and diffusion information➤ -Interactive selection of fiber tracts with display options one-color and directional-color-code➤ -Overlay to other anatomical or functional image sets➤ -Conversion into 3D objects for use with navigation➤ - Software should provide multicolor output to fibertract according to their diffusion direction, i.e. separate fiber color for each tracts from (1) "Left-Right", (2) "Anterior-Posterior", (3) "Head-Foot". • <u>BOLD mapping Software</u><ul style="list-style-type: none">➤ The Software should have the following features➤ -Includes automatic import of DICOM BOLD MRI data➤ -Pre-processing of data incl. motion correction, slice time correction and smoothing➤ -Flexible definition of different functional paradigms➤ -Support of block-designed paradigms for motoric and speech areas➤ -Automatic detection of functional activations➤ -Time series view for verification of signal to paradigm correlation➤ -Interactive selection and display of functional areas and regions of interest➤ -Conversion into 3D objects for use with other Brainlab applications including navigation➤ -Brain surface (Cerebrum) segmentation for enhanced orientation in 3D view
4	Angio Planning Software-Module <ul style="list-style-type: none">• Fast and accurate nidus definition exploiting a fusion between a 3D data set and an unlocalized 2D dynamic angiography• Automatic vessel segmentation in contrast-enhanced volumetric data sets• Vascular co-registration of volumetric images to an unlocalized 2D dynamic angiographic image sequence• Color-coded blood flow in angiography providing temporal flow information to differentiate effluent and affluent vessels from nidus• Automatic segmentation of a volumetric nidus object within a region-of-interest that has been defined on the angiography



	<ul style="list-style-type: none">• Seamless nidus object refinement on co-registered planar and volumetric data sets with a smart contouring tool• Possibility to register and exploit unlocalized diagnostic 2D dynamic angiographies• Optimized views bring time and spatial information from angiographic and volumetric data set into relation
5	<p>Cranial Navigation –Module</p> <ul style="list-style-type: none">• System should be capable of performing wide range of cranial procedures with Optical tracking and Electromagnetic Tracking Technology• The system should have marker based point registration with accuracy prediction system.• The system should have marker less surface based registration with accuracy prediction system.• System should have skin sensitive registration to avoid issues like skin shift inaccuracies specially for difficult patient positioning like prone positioning surgeries.• System should incorporate rescue points to recover navigation registration during surgery in case of registration accuracy loss during surgery.• The system should integrate Touchless laser based registration device which is already available at NIMHANS. No physical contact should be there with patient and device during registration to avoid errors due to skin shift• Should have Hardware for patient referencing without head fixation for pinless surgery• The probe should have capability to show images at -20mm to 180mm in front of it (Tool Tip Extension).• System should integrate the existing rigid instruments based on 3D geometry of instruments of various companies, their diameters and length. Ex 3rd party Biopsy Needles & Stylets.• The system should be able to have options like Zoom-in, Zoom-out, different layouts, different viewing options, taking screen shots etc.• System should provide with pre-calibrated stylet to navigate the third party catheters and shunts along the pre-planned trajectory• The system should help to create and review the intra-op trajectories by using navigation instrument(tracker) for frameless biopsy procedures .Also, it should provide "navigable trajectory entry point" to change the entry point position intra-operatively by using navigation tool .• software should support network based software interface of the navigation system which allows to download medical images and real time tool tracking data from the navigation system
6	<p>Integration with existing High-End Biopsy System</p> <ul style="list-style-type: none">• The Navigation system should integrate the existing high-end Biopsy system with the following features which is already available with NIMHANS• It should have Fine-adjustment for navigated frameless biopsies, shunt placements & endoscopic examination guided by the navigation system• Should allow precise online tracking according to the pre-planned trajectory• Should adapt to fit cylindrical instruments, including biopsy needles and endoscopes, of 1.8-2.0mm,2.0-2.5mm,2.5-3.0mm,3.0-4.0mm and 4.0-5.0mm,5.0-6.0mm,6.0-7.0mm,7.0-



	<p>8.0mm(1.8mm - 8.0mm)and up to 300g; Holds instruments with a length of up to 35 cm.</p> <ul style="list-style-type: none">• Software wizard should guide the surgeon to align the joint locks in a step by step manner to achieve the planned trajectory. Once alignment for a position is achieved, software should move automatically for subsequent position for precise trajectory position.• The system should allow the integration of Precalibrated biopsy needles as well as autoclavable& reusable biopsy needles available in the Hospital. If biopsy needle with Hospital cannot be integrated then Disposable pre-calibrated biopsy needles should be supplied for at least 50 cases.• The system should include a frameless biopsy system with navigable needles. Navigation ready pre-calibrated needles should be provided for at least 50 cases.
7	<p>Spine Navigation –Module</p> <ul style="list-style-type: none">• System should offer Fluoro based spinal application with live Fluoro integration (C-arm).• The system should use existing C-Arm integration Kit which already available in the Neurosurgery Department at NIMHANS or new C-arm for Integration kits for atleast two C-arms should be provided .Any flat panel 2D C-arm which the institution might buy in future also should be integrated• The system should integrate the navigation Spine referencing set which is already available with the department• System should have option of full or partial screw (virtual) to avoid pedicle perforation for pedicle screw placement• System should integrate the existing available instruments in OT like Surgical Awl and probe etc. based on diameter, length and vector for tracking.• System should have real time tracking and visualization of a pointer and up to 4 instruments simultaneously in various views.• System should be provided with Radiolucent Spine Reference Clamp to reduce artifacts in intra-operative navigated surgeries• Spine navigation should be implant independent and pedicle screw implant from any implant vendor can be used• Software should allow Zoom, Flip, Rotate , Windowing and PAN features• Flat panel C-arm should be integrated and compatible for navigation.• Software should allow Zoom, Flip, Rotate , Windowing and PAN features• It Should integrate with Spine tumor planning software already installed at NIMHANS Server. Also image fusion and tumor marking Softwares should be integrated for Spine tumor surgeries
8	<p>Microscope Integration –Module: Mandatory Optional Item</p> <ul style="list-style-type: none">• The Software should have the following features• Navigation System should be capable of Integration with Navigation Ready latest Microscope from Leica / Zeiss / HG Moller.• The system should have Multicolor HUD which allows to allocate different colors to different organs in contouring.• -Microscope integration to provide Compensation for brain shift by matching vessels (Maximum



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	<p>Intensity Projection) or planned objects with anatomy seen. This integration should have the capability for the Microscope to Auto track pointer & autofocus accordingly. These Augmented structures include anatomical objects like vessels, fiber tracts, trajectories and points. Visualization of these augmented planned structures injected as semi-transparent volumes into ocular</p> <ul style="list-style-type: none">• The microscope should be integrated for Cranial and Spinal navigation modules
9	The hardware and Softwares of the system should be FDA and CE approved
10	One full time Manpower support has to be provided by the vendor for service and application support

WARRANTY: 5 YEARS

COMPREHENSIVE MAINTENANCE CONTRACT [CMC]: 6TH to 10TH Year (5 Years)

