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KWAZULU-NATAL PROVINCE  
HEALTH  
REPUBLIC OF SOUTH AFRICA

## KZN Health Intranet

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AdvertQuote



KWAZULU-NATAL PROVINCE  
HEALTH  
REPUBLIC OF SOUTH AFRICA

### Quotation Advert

Opening Date: 2022-09-02

Closing Date: 2022-09-07

Closing Time: 11:00

#### INSTITUTION DETAILS

Institution Name: Newcastle hospital

Province: KwaZulu-Natal

Department or Entity: Department of Health

Division or section: Central Supply Chain Management

Place where goods / services is required: NEWCASTLE REGIONLA HOSPITAL - PHYSIO

Date Submitted: 2022-09-01

#### ITEM CATEGORY AND DETAILS

Quotation Number: ZNQ: NEH/275/22/23

Item Category: Goods

Item Description: NERVE CONDUCTION TEST MACHINE (ELECTROMYOGRAPHY)

Quantity (if supplies): 1

#### COMPULSORY BRIEFING SESSION / SITE VISIT

Select Type: Not Applicable

Date:

Time:

Venue:

QUOTES CAN BE COLLECTED FROM: DOCUMENT ATTACHED TO ADVERT

QUOTES SHOULD BE DELIVERED TO: NEWCASTLE REGIONAL HOSPITAL, NO 4 HOSPITAL STREET, TENDER BOX, FRONT FOYER

#### ENQUIRIES REGARDING THE ADVERT MAY BE DIRECTED TO:

Name: ROSIE MAIKOO

Email: rosie.malkoo@kznhealth.gov.za

Contact Number: 0343280091

Finance Manager Name: MISS PW MAZIBUKO

Finance Manager Signature:

No late quotes will be considered







## GENERAL CONDITIONS OF CONTRACT

### 1. AMENDMENT OF CONTRACT

- 1.1. Any amendment to or renunciation of the provisions of the contract shall at all times be done in writing and shall be signed by both parties.

### 2. CHANGE OF ADDRESS

- 2.1. Bidders must advise the Department of Health (institution where the offer was submitted) should their address (*domicilium citandi et executandi*) details change from the time of bidding to the expiry of the contract.

### 3. GENERAL CONDITIONS ATTACHED TO THIS QUOTATION

- 3.1. The Department is under no obligation to accept the lowest or any quote.
- 3.2. The Department reserves the right to communicate in writing with vendors in cases where information is incomplete or where there are obscurities regarding technical aspects of the offer, to obtain confirmation of prices or preference claims in cases where it is evident that a typing, written, transfer or unit error has been made, to investigate the vendor's standing and ability to complete the supply/service satisfactorily.
- 3.3. **ALL DECISIONS TAKEN BY THE DEPARTMENT ARE FINAL, INCLUDING THE AWARD OR CANCELLATION OF THIS QUOTATION.**
- 3.4. The price quoted must include VAT (if VAT vendor).
- 3.5. Should a bidder become a VAT vendor after award or during the implementation of a contract, they may not request the VAT percentage from the Department as the service provider made an offer during the period they were not registered as a VAT vendor. The Department is only liable for any VAT from registered VAT vendors as originally stated on the quotation document.
- 3.6. The bidder must ensure the correctness & validity of the quotation:  
 (i) *that the price(s), rate(s) & preference quoted cover all for the work/item (s) & accept that any mistakes regarding the price (s) & calculations will be at the bidder's risk*  
 (ii) *it is the responsibility of the bidder to confirm receipt of their quotation and to keep proof thereof.*
- 3.7. The bidder must accept full responsibility for the proper execution & fulfilment of all obligations conditions devolving on under this agreement, as the Principal (s) liable for the due fulfilment of this contract.
- 3.8. This quotation will be evaluated based on the 80/20 points system, specification, correctness of information and/or functionality criteria. All required documentation must be completed in full and submitted.
- 3.9. Offers must comply strictly with the specification.
- 3.10. Only offers that meet or are greater than the specification will be considered.
- 3.11. Late offers will not be considered.
- 3.12. Expired product/s will not be accepted. All products supplied must be valid for a minimum period of six months.
- 3.13. Used/ second-hand products will not be accepted.
- 3.14. A bidder not registered on the Central Suppliers Database or whose verification has failed will not be considered.
- 3.15. All delivery costs must be included in the quoted price for delivery at the prescribed destination.
- 3.16. Only firm prices will be accepted. Such prices must remain firm for the contract period. Non-firm prices (including rates of exchange variations) will not be considered.
- 3.17. In cases where different delivery points influence the pricing, a separate pricing schedule must be submitted for each delivery point.
- 3.18. In the event of a bidder having multiple quotes, only the cheapest according to specification will be considered.
- 3.19. Verification will be conducted to identify if bidders have multiple companies and are cover-quoting for this bid.
- 3.20. In such instances, the Department reserves the right to immediately disqualify such bidders as cover-quoting is an offence that represents both corruption and acquisition fraud.

### 4. SPECIAL INSTRUCTIONS AND NOTICES TO BIDDERS REGARDING THE COMPLETION OF THIS QUOTATION.

- 4.1. Unless inconsistent with or expressly indicated otherwise by the context, the singular shall include the plural and vice versa and with words importing the masculine gender shall include the feminine and the neuter.
- 4.2. Under no circumstances whatsoever may the quotation/bid forms be retyped or redrafted. Photocopies of the original bid documentation may be used, but an original signature must appear on such photocopies.
- 4.3. The bidder is advised to check the number of pages and to satisfy himself that none are missing or duplicated.
- 4.4. Quotations submitted must be complete in all respects. However, where it is identified that information in a bidder's response, which does not affect the preference points or price, is incomplete in any respect, the said supplier meets all specification requirements and scores the highest points in terms of preference points and price, the Department reserves the right to request the bidder to complete/submit such information.
- 4.5. Any alteration made by the bidder must be initialled; failure to do so may render the response invalid.
- 4.6. Use of correcting fluid is prohibited and may render the response invalid.
- 4.7. Quotations will be opened in public as soon as practicable after the closing time of quotation.
- 4.8. Where practical, prices are made public at the time of opening quotations.
- 4.9. If it is desired to make more than one offer against any individual item, such offers should be given on a photocopy of the page in question. Clear indication thereof must be stated on the schedules attached.

4.10. The Department is under no obligation to pay suppliers in part for work done if the supplier can no longer for fulfil their obligation.

**5. SPECIAL INSTRUCTIONS REGARDING HAND DELIVERED QUOTATIONS**

- 5.1. Quotation shall be lodged at the address indicated not later than the closing time specified for their receipt, and in accordance with the directives in the quotation documents.
- 5.2. Each quotation shall be addressed in accordance with the directives in the quotation documents and shall be lodged in a separate sealed envelope, with the name and address of the bidder, the quotation number and closing date indicated on the envelope. The envelope shall not contain documents relating to any quotation other than that shown on the envelope. If this provision is not complied with, such quotations/bids may be rejected as being invalid.
- 5.3. All quotations received in sealed envelopes with the relevant quotation numbers on the envelopes are kept unopened in safe custody until the closing time of the quotation/bids. Where, however, a quotation is received open, it shall be sealed. If it is received without a quotation/bid number on the envelope, it shall be opened, the quotation number ascertained, the envelope sealed and the quotation number written on the envelope.
- 5.4. A specific box is provided for the receipt of quotations, and no quotation found in any other box or elsewhere subsequent to the closing date and time of quotation will be considered.
- 5.5. No quotation/bid sent through the post will be considered if it is received after the closing date and time stipulated in the quotation documentation, and proof of posting will not be accepted as proof of delivery.
- 5.6. Quotation documents must not be included in packages containing samples. Such quotations may be rejected as being invalid.

**6. SAMPLES**

- 6.1. In the case of the quote document stipulating that samples are required, the supplier will be informed in due course when samples should be provided to the institution. (This decreases the time of safety and storage risk that may be incurred by the respective institution). The bidders sample will be retained if such bidder wins the contract.
  - (i) If a company/s who has not won the quote requires their samples, they must advise the institution in writing of such.
  - (ii) If samples are not collected within three months of close of quote the institution reserves the right to dispose of them at their discretion.
- 6.2. **Samples must be made available when requested in writing or if stipulated on the document.**
  - (i) If a Bidder fails to provide a sample of their product on offer for scrutiny against the set specification when requested, their offer will be rejected. All testing will be for the account of the bidder.

**7. COMPULSORY SITE INSPECTION / BRIEFING SESSION**

7.1. Bidders who fail to attend the compulsory meeting will be disqualified from the evaluation process.

- (i) The institution has determined that a compulsory site meeting  take place
- (ii) Date  /  /  Time :  Place

Institution Stamp:	Institution Site Inspection / briefing session Official
	Full Name: .....
	Signature: .....
	Date: .....

**8. STATEMENT OF SUPPLIES AND SERVICES**

8.1. The contractor shall, when requested to do so, furnish particulars of supplies delivered or services executed. If he/she fails to do so, the Department may, without prejudice to any other rights which it may have, institute inquiries at the expense of the contractor to obtain the required particulars.

**9. SUBMISSION AND COMPLETION OF SBD 6.1**

9.1. Should a bidder wish to qualify for preference points they must complete a SBD 6.1 document. Failure by a bidder to provide all relevant information required, will result in such a bidder not being considered for preference point's allocation. The preferences applicable on the closing date will be utilized. Any changes after the closing date will not be considered for that particular quote.

**10. TAX COMPLIANCE REQUIREMENTS**

- 10.1. In the event that the tax compliance status has failed on CSD, **it is the suppliers' responsibility to provide a SARS pin in order for the institution to validate the tax compliance status of the supplier.**
- 10.2. In the event that the institution cannot validate the suppliers' tax clearance on SARS as well as the Central Suppliers Database, **the quote will not be considered and passed over as non-compliant according to National Treasury Instruction Note 4 (a) 2016/17.**

## 11. TAX INVOICE

11.1. A tax invoice shall be in the currency of the Republic of South Africa and shall contain the following particulars:

- |  |  |
|--|--|
| (i) the name, address and registration number of the supplier;                           | (iv) a description and quantity or volume of the goods or services supplied; |
| (ii) the name and address of the recipient;  | (v) the official department order number issued to the supplier;             |
| (iii) an individual serialized number and the date upon which the tax invoice is issued; | (vi) the value of the supply, the amount of tax charged;                     |
|  | (vii) the words tax invoice in a prominent place.                            |

## 12. PATENT RIGHTS

The supplier shall indemnify the **KZN Department of Health** (hereafter known as the purchaser) against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

## 13. PENALTIES

- 13.1. If at any time during the contract period, the service provider is unable to perform in a timely manner, the service provider must notify the institution in writing/email of the cause of and the duration of the delay. Upon receipt of the notification, the institution should evaluate the circumstances and, if deemed necessary, the institution may extend the service provider's time for performance.
- 13.2. In the event of delayed performance that extends beyond the delivery period, the institution is entitled to purchase commodities of a similar quantity and quality as a substitution for the outstanding commodities, without terminating the contract, as well as return commodities delivered at a later stage at the service provider's expense.
- 13.3. Alternatively, the institution may elect to terminate the contract and procure the necessary commodities in order to complete the contract. In the event that the contract is terminated the institution may claim damages from the service provider in the form of a penalty. The service provider's performance should be captured on the service provider database in order to determine whether or not the service provider should be awarded any contracts in the future.
- 13.4. If the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance.

## 14. TERMINATION FOR DEFAULT

- 14.1. The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
- (i) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract,
  - (ii) if the supplier fails to perform any other obligation(s) under the contract; or
  - (iii) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
- 14.2. In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services.
- 14.3. Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

## 15. THE DEPARTMENT RESERVES THE RIGHT TO PASS OVER ANY QUOTATION WHICH FAILS TO COMPLY WITH THE ABOVE.

**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017**

This preference form must form part of all quotes invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

**NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.**

**1. GENERAL CONDITIONS**

- 1.1 The following preference point systems are applicable to all quotes:
- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- 1.2 The value of this quote is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable.
- 1.3 Points for this quote shall be awarded for:
- (a) Price; and
  - (b) B-BBEE Status Level of Contributor.
- 1.4 The maximum points for this quote is allocated as follows:

	<b>POINTS</b>
<b>PRICE</b>	80
<b>B-BBEE STATUS LEVEL OF CONTRIBUTOR</b>	20
<b>Total points for Price and B-BBEE must not exceed</b>	<b>100</b>

- 1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the quote, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.
- 1.6 The purchaser reserves the right to require of a bidder, either before a quote is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

**2. DEFINITIONS**

- (a) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **"B-BBEE status level of contributor"** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **"EME"** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **"functionality"** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **"prices"** includes all applicable taxes less all unconditional discounts;
- (h) **"proof of B-BBEE status level of contributor"** means:
  - 1) B-BBEE Status level certificate issued by an authorized body or person;
  - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
  - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (i) **"QSE"** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;



**3. POINTS AWARDED FOR PRICE**

**3.1 THE 80/20 PREFERENCE POINT SYSTEMS**

A maximum of 80 points is allocated for price on the following basis:

$$P_s = 80 \left( 1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \text{ Where}$$

- P<sub>s</sub> = Points scored for price of bid under consideration
- P<sub>t</sub> = Price of bid under consideration
- P<sub>min</sub> = price of lowest acceptable bid

**4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR**

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

**5. BID DECLARATION**

5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

**6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1**

6.1 B-BBEE Status Level of Contributor: = .....(maximum of 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

**7. SUB-CONTRACTING**  
applicable box)

(Tick

YES	NO	
-----	----	--

7.1 Will any portion of the contract be sub-contracted?

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted..... %
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....

8. Whether the sub-contractor is an EME or QSE

(Tick applicable box)

iv) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations,2017:

YES	NO	
-----	----	--

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

9. **DECLARATION WITH REGARD TO COMPANY/FIRM**

9.1 Name of company/firm:.....

9.2 VAT registration number:.....

9.3 Company registration number:.....

9.4 **TYPE OF COMPANY/ FIRM [TICK APPLICABLE BOX]**

- Partnership/Joint Venture / Consortium
- One person business/sole propriety
- Close corporation
- Company
- (Pty) Limited

9.5 **DESCRIBE PRINCIPAL BUSINESS ACTIVITIES**

.....  
.....

9.6 **COMPANY CLASSIFICATION [TICK APPLICABLE BOX]**

- Manufacturer
- Supplier
- Professional service provider
- Other service providers, e.g. transporter, etc.

9.7 Total number of years the company/firm has been in business:.....

9.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

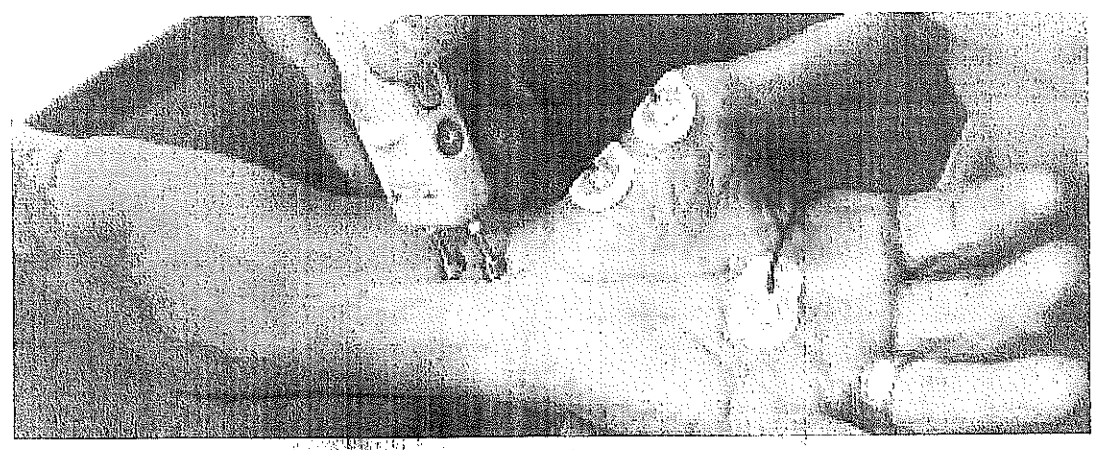
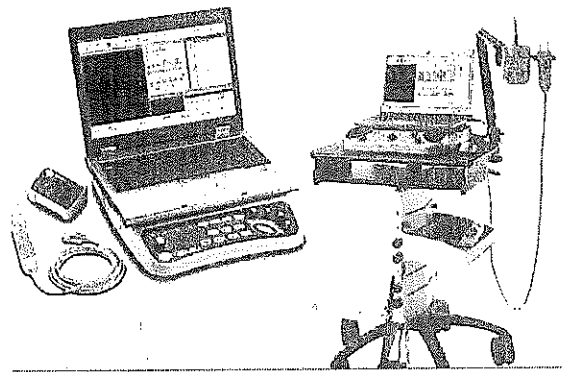
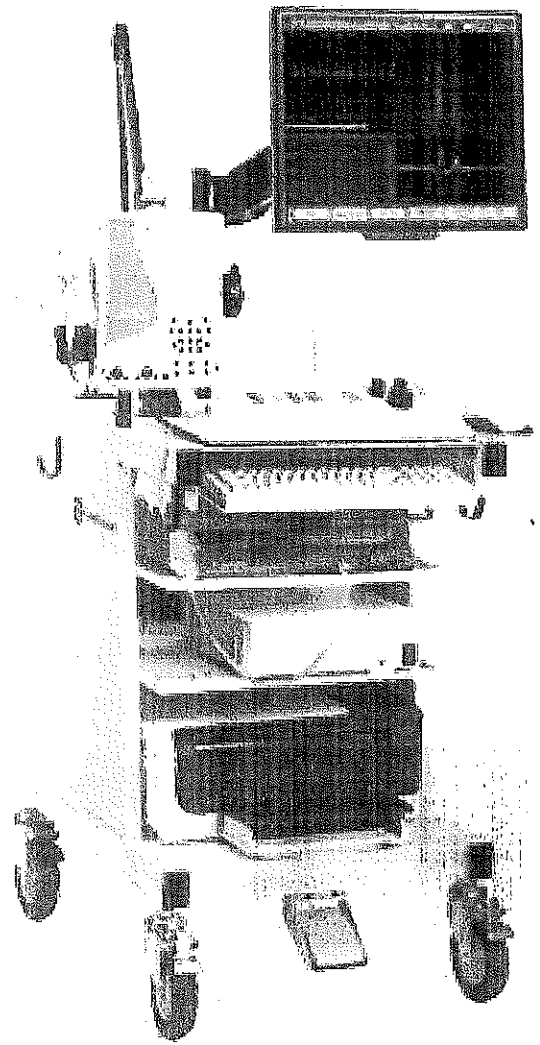
- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
  - (a) disqualify the person from the bidding process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
  - (e) forward the matter for criminal prosecution.

<b>WITNESSES</b>	
1.	.....
2.	.....

..... <b>SIGNATURE(S) OF BIDDERS(S)</b>
<b>DATE:</b> .....
<b>ADDRESS:</b> ..... ..... .....

ZNQ/NEH/275/22/23

Nerve Conduction Study/Electromyography Machine



ZNA/NEH/275/22/23.

REVISED: 12/10/2020

## PROVINCE OF KWAZULU-NATAL

DEPARTMENT OF HEALTH

# HEALTH TECHNOLOGY SERVICES (H.T.S)

SPECIFICATION FOR: ELECTROMYOGRAPHY  
UMDNS:

SPECIFICATION: H.T.S. NO. E276 (ELECTRONICS)

**Description of Unit: 2 (two) channel computerized  
Electromyography, Nerve conduction and evoked potential system.**

### Intended Areas of Use:

REGIONAL

TERTIARY

### Expert Advisory Group:

Dr a Naidoo

Mr. C. Cowlen – HTS Senior  
Technician

**NB: GENERAL CLAUSES THAT DO NOT APPLY TO THE EQUIPMENT OFFERED MUST BE ANSWERED "COMPLIES", "DOES NOT COMPLY" OR ANSWER THE QUESTION UNDER BIDDERS COMMENTS.**

NO	SPECIFICATION	BIDDERS COMMENTS: STATE "COMPLIES" OR "DOES NOT COMPLY" OR ANSWER THE QUESTION.
Clause G1	<p>The space provided under "Bidder's Comments" for each clause must be used for this purpose. Bidders who neglect to provide answers to every Clause in this Bid Specification will be disqualified. Bidders must note that abbreviated answers e.g. N/A etc. will not be accepted.</p> <p>Bidders must also note that no part of any clause/s in this Bid Specification may be altered. Where there are traces of alterations found to any clauses in this Bid Specification during Adjudication, the Adjudication Committee will reserve the right to disqualify the bidder.</p> <p>The Bidder must clearly indicate if their offered product complies with the stated requirements, by indicating, "Complies" or "Does not comply" or answer the question next to the corresponding clause.</p>	
Clause G2	All responses must be clear and legible.	
Clause G3	<b>GUARANTEE:</b>	
Clause G3.1	<p>All Equipment, Materials and Workmanship provided under this Contract must be Guaranteed for a minimum period of twenty four (24) Months. The successful bidder must arrange with the respective Hospital / Institution and the Health Technology Services before Commissioning the Equipment at the respective Hospital / Institution.</p> <p>The bidder to note that the Guarantee period must only take effect upon successful Commissioning at the respective Hospital / Institution and successful test and acceptance by the Health Technology Services.</p>	
Clause G3.2	State percentage guaranteed up time of machine (Should be at least 99%).	
Clause G3.3	The recommended number of services, per annum, by the manufacturer, must be included during and up until the end of the guarantee period and all costs related to the provision of such service/s will be for the bidders account.	
Clause G3.4	The bidder must state the number of services that will be provided during and up to the end of the guarantee period.	
Clause G3.5	Any breakdown during the guarantee period must include all cost (spares, labour, travelling and sundries) for any prescribed maintenance services (major and minor) as well as any QA testing that is required by Department Health's Radiation Control Board during the guarantee period.	
Clause G3.6	Travelling and Travelling Time costs must be included during the Guarantee Period?	
Clause G3.7	Spares that may be required during the Guarantee Period will be supplied at the expense of the bidder.	
Clause G3.8	Downtime during the Guarantee Period must extend the Guarantee time on a Day-to-Day basis.	
Clause G3.9	Any repetition (twice or more) of the same type of fault that first occurred during the guarantee period must be considered as a repair under guarantee if it occurs within the first year after the expiry of the guarantee period.	
Clause G3.10	The same guarantee conditions must apply to replacement units.	
Clause G4	The successful bidder must Supply, Deliver, Commission and install the Equipment and will be required to demonstrate the product to the applicable Staff at the Institution and costs for the abovementioned must be included in	

NO	SPECIFICATION	BIDDERS COMMENTS: STATE "COMPLIES" OR "DOES NOT COMPLY" OR ANSWER THE QUESTION.
	the final bid price.	
Clause G5	Bidders must offer the Health Technology Service's In House Technicians a demonstration of the product, which will enable the Health Technology Service's In House Technicians to become acquainted with the equipment during the Test and Acceptance phase.	
Clause G6	Preference may be given to a make and model that has been technically and clinically evaluated by a Government Institution within the R.S.A. (Attach proof of evaluation where applicable).	
Clause G7	The successful bidder must provide the Health Technology Service's in house Technicians, <b>full training</b> in the calibration, maintenance, service and repair of the product down to PCB Level. N.B. The quality and level of the training must be equivalent to the manufacturer's original factory training and any costs incurred to provide this training will be for the bidders account. A Certificate of Competency must be issued on completion of the training. The Training must be provided by the successful bidder to the Health Technology Services within three months from date of initial supply and delivery of the equipment to the end user.	
Clause G8	<b>SERVICING:</b>	
Clause G8.1	The bidder must have a well established service and repair facility in KwaZulu-Natal, to service, repair and calibrate the equipment offered. (The Health Technology Services reserves the right to inspect the premises).	
Clause G8.2	If the service is subcontracted to a local service agent, a signed copy of the letter of appointment by the bidder and acceptance by the subcontractor must be submitted with this bid / quotation. (The Health Technology Services reserves the right to inspect the premises).	
Clause G8.3	State Number of other medical equipment "Repair & Service" Agencies (excluding your Agency) represented by the subcontractor.	
Clause G8.4	Supply the Name, Address and Telephone Number/s of the Local Service Department within KwaZulu-Natal.  <b>Please supply details as follows:</b>  Company name : _____  Physical Address : _____ _____  Telephone Number/s : _____ Fax number : _____ _____  <i>(The Health Technology Services reserves the right to inspect the premises).</i>	
Clause G8.5	State if the Technician(s) are in the direct employ of the bidder or a subcontractor.	
Clause G8.6	The bidder must supply information on the number of Technicians permanently working in KwaZulu-Natal and their names and contact	

NO	SPECIFICATION	BIDDERS COMMENTS: STATE "COMPLIES" OR "DOES NOT COMPLY" OR ANSWER THE QUESTION.
	Telephone Number/s must be listed (Directly employed or subcontracted) in an annexure to the bid document.	
Clause G8.7	The Technician(s) must be original equipment manufacturer trained to deal with the service, repair and calibration of the equipment quoted on. <b>N.B. Proof of original equipment manufacturer training must be submitted with this bid / quotation offer.</b>	
Clause G8.8	The Institution's requirement is that a technician is available within a reasonable time (24 hours) to attend to malfunctioning equipment. The Bidder to state the technician per install base e.g. equipment ratio to technician ratio, e.g. 1 technician per 10 pieces of equipment.	
Clause G9	The bidder must Guarantee that no additional equipment will be required for the successful operation of the equipment bided for on delivery and commissioning at the customers site. A starter pack of all essential accessories and disposables must be supplied so that the unit can be put into immediate operation. The cost of the starter pack must be included in the final bid price.	
Clause G10	Optional accessories must be offered for separately on the Schedule of optional accessories found at the end of this Technical specification, indicating catalogue numbers, correct descriptions and Prices inclusive of V.A.T.	
Clause G11	Bidder must state the period of time for delivery of Spare parts following the receipt of an official order as follows: 0 to 10 days; 0 to 20 days; 0 to 30 days; 0 to 60 days; 0 to 90 days; more than 90 days.	
Clause G11.1	The Bidder must supply with this offer a list together with the quantities of spares held locally in stock in the KwaZulu-Natal Province on the offered product. The Health Technology Services reserves the right to inspect the premises to verify the spares stock held.	
Clause G12	The bidder must include a firm commitment in writing, which must be attached with this bid that they would supply spares, components, upgrades, complete original service / repair manual, technical support and ongoing training support for technical staff of the Health Technology Services and the end users Department of Health, KwaZulu-Natal throughout the life cycle of the equipment offered.	
Clause G13	Spares must be available for 10 (Ten) years from the original equipment manufacturer for the product offered.	
Clause G14	<b>The successful bidder must include in their offer at no extra cost to the final bid price:</b>	
Clause G14.1	Complete user Operation / Maintenance Manual x 2 (two) Book / File; CD; DVD copies in English Language.	
Clause G14.2	Complete <b>ORIGINAL</b> Service / Repair Manual x 2 (two) Book / File; CD; DVD copies in English Language which <b>MUST</b> include the following information: Fault Finding Guide, Circuit Diagrams / Schematics, Circuit Descriptions, and <b>PCB</b> Layouts, Calibration Guide, Part Numbers and exploded diagram of Mechanical Parts / Panels.	
Clause G14.3	All the above Manuals must be properly bound in either a Book, File or CD form.	
Clause G14.4	The Bidder must supply all software (including software-keys and / or passwords) to allow for trouble shooting (faultfinding), maintenance, calibrations, repairs and services at no additional cost.	

NO	SPECIFICATION	BIDDERS COMMENTS: STATE "COMPLIES" OR "DOES NOT COMPLY" OR ANSWER THE QUESTION.
Clause G15	Does your Company have an after hour service back up facility.	
Clause G16	If the equipment is taken away for repairs, a loan set must be made available on request to the end user by the Institution until the Institution's unit is returned. All costs incurred for providing the loan unit must be for the bidders account.	
Clause G17	Bidder must bid on the latest model and Technology that fully complies with this Technical Specification.	
Clause G17.1	The Bidder must state how long this technology has been commercially available (state when the model offered was launched).	
Clause G17.2	The bidder must state if there are any near future updates expected.	
Clause G18	The successful bidder must maintain a system for notifying and providing users with Updates, Modifications, new Software Releases and Recalls.	
Clause G19	The successful bidders must arrange for an acceptance test of the equipment with the Manager of the Health Technology Services and the Hospital Manager. A copy of the original answered Specification, copy of the invoice order and relevant paperwork (PH form) from the receiving Hospital must be submitted with the equipment when the <b>ACCEPTANCE TEST</b> is to be undertaken.	
Clause G20	Where equipment bided for, operates off 220 Volt, 50Hz a.c. supply, bidder must ensure that the product being quoted for is fitted with a 15 Amp approved mains plug top, which is held together by two screws.	
Clause G21	The unit must comply with an acceptable International Electrical Safety Standard such as <b>IEC 60601-1</b> and <b>60601-1-2</b> for Medical Equipment where the quoted equipment operates off an electrical supply.	
Clause G22	<b>All equipment, the installation and any alteration / additions must comply with:</b>	
Clause G22.1	The Occupational Health and Safety Act (1993);	
Clause G22.2	The wiring code S.A.N.S. 0142.	
Clause G23	Units being quoted for must be CE Certified. (Attach a copy of certification). The make and the model offered must be reflected on the certificate.	
Clause G24	The Mains Cable of the unit being quoted for must be the Hospital Grade Type and it must be a minimum length of (3) three metres. N.B. The mains cable of the unit being quoted for must be S.A.N.S. colour coded.	
Clause G25	The equipment being quoted for must be protected against Electro magnetic Interference.	
Clause G26	Only new equipment must be quoted for. Refurbished and reconditioned equipment being quoted on will not be accepted.	
Clause G27	Bidders must note that dedicated test equipment, spare parts and any special tooling required for the upkeep and maintenance of the equipment quoted on must be available to the Health Technology Services to procure if requested.	
Clause G28	All the necessary calibration and maintenance software, where applicable, required to maintain and calibrate the equipment, must be supplied with the equipment to the Health Technology Services at no extra cost to the final bid price.	
Clause G29	<b>NB. HAZARDOUS SUBSTANCE ACT:</b>	
Clause G29.1	If this type of equipment / apparatus appears on the schedule of Hazardous	



NO	SPECIFICATION	BIDDERS COMMENTS: STATE "COMPLIES" OR "DOES NOT COMPLY" OR ANSWER THE QUESTION.
	Substances issued by the Directorate: Health Technology of the Department of Health, a license in terms of the Act on Hazardous Substances (Act. 15/1973) must be submitted with this bid document. The license must be registered under the bidders name or a letter of joint venture must be submitted by the license holder where the license is not in the name of the bidder. Bidders that neglect to submit a license will not be considered.	
Clause G29.2	Bidder must state the Radiation Control licence number of the make and model of equipment offered.	License No:
Clause G29.3	Where it has been established by the bidder that the equipment offered does not require Radiation Control licence, proof from the Radiation Control authority must be submitted with this bid document.	
Clause G30	The system offered must comply fully with or exceed all of the minimum specification requirements per the Technical Clauses.	
Clause G31	The offer submitted must be supported by descriptive literature, colour pamphlets, colour brochures and technical data sheets applicable to the offer (i.e. supporting information for all components of the system) must accompany the bid, failing which the bid will not be considered.	
Clause G32	The equipment and any accessories ordered from the successful bidder will be delivered, installed, tested, calibrated, demonstrated (including specified training) and commissioned in the specific Hospital at the expense of the successful Bidder, prior to full payment being made.	
Clause G33	All prices are to include V.A.T. and must be quoted in the South African currency. The price must be valid for a period of 180 days from closing date of bid.	
Clause G34	If the product offered is unknown to the Department, the Department reserves the right to have the unit evaluated by a team of Technical and Clinical experts with regards to its functionality, performance and quality. The decision of this committee will be used as a motivation for the evaluation and recommendation of the bid. For this reason a demonstration unit must be readily available within 14 days, or the bidder must take arrangement for demonstration with representatives of the Department for the equipment offered at a site within South Africa where a same make and model of unit is installed and is in full clinical operation. The cost of this site visit is for the account of the bidder and it must therefore not place any obligation on the Department to procure from the bidder.	
Clause G35	The Institution requesting the unit reserves the right to clinically trial and evaluate the unit in order to ensure that the unit meets the clinical requirements of the Department before adjudication of the bid.	
Clause G36	<b>UPGRADEABILITY WHERE APPLICABLE:</b>	
Clause G36.1	Bidders are to state the policy with regard to future software updates and the costs that will be involved.	
Clause G36.2	The Bidder to state what hardware and software will be available, with costs and projected dates.	
Clause G37	<b>UPGRADE POLICY:</b>	
Clause G37.1	All future upgrades (hardware and software) involving patient safety must be offered at no additional cost.	
Clause G37.2	All future upgrades removing software viruses from existing software must be supplied at no cost.	
Clause G37.3	Any upgrade before or after installation of the equipment involving additional cost must be brought to the attention of the Manager, Health Technology Services.	
Clause G38	The Bidder must indicate the expected life of their offered unit and software in years.	

## TECHNICAL SPECIFICATION.

### Clause T1

This specification establishes the requirements, supply, delivery, end user training, demonstration, commission and installation of a 2 (two) channel computerized Electromyography, Nerve conduction and evoked potential system, consisting of PC, Monitor (colour), Extended Keyboard, Mouse, Amplifiers, Averager, Stimulators, CD Rom, Speakers, Laser Printer, Junction Box Stand, Cart (Trolley), relevant Software to run the System, A/D Converter, Pattern Reversal Monitor, LEG Goggles and Headphones, expandable up to 4 channels.

### Clause T2

**The Mainframe must meet the following requirements:**

#### Clause T2.1

PC Unit with Full Extended Keyboard and Mouse.  
Processor: Dell OptiPlex Core i5 3GHz 8GB RAM 500GB SSD or equivalent or better.  
The Hard Disk: 500GB SSD or better  
CD Rom Drive.  
Memory: 8 GB RAM or better.  
64 Bit Video Card (2M/byte VRAM).  
Windows Based Software – Win 10 64 bit OS  
Operation Panel Unit.  
System Disk.  
Cart (Trolley).  
Junction Box Stand.  
At least 4 (four) Channel Junction Box.  
Program Software.  
Colour Monitor - 23 inch LCD  
Laser Printer – Colour

### BIDDER'S COMMENTS:

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### Clause T3

**The Nerve Conduction, EMG and Visual Evoked Potential System**

#### Clause T3.1

The System should provide a minimum of 2 simultaneous recording channels expandable to 4 Channels.

#### Clause T3.2

The system should be multi-tasking and allow at least 8 test protocols to be opened simultaneously.

#### Clause T3.3

EMG and test findings should be able to be entered during the examination.

#### Clause T3.3

The following multiple waveform marking options should be available.

- Fully Automatic

- Manual marking
- Select the onset or peak and remaining markers are set automatically.

#### **Clause T3.5**

A normative data column allowing customizable normative data for velocity, latency and amplitude should be provided for NCS studies.

#### **Clause T3.6**

A quick Muscle selection list box should be provided.

#### **Clause T3.7**

A simultaneous standard triggered, superimposed and live free running waveform display should be available

#### **Clause T3.8**

A Temperature compensated conduction velocity feature is recommended

#### **Clause T3.9**

The live EMG waveforms should be able to be played back immediately within the EMG acquisition program

#### **Clause T3.10**

The system should provide for an integrated Temperature measurement port that accepts a standard YSI temperature probe

#### **Clause T3.11**

**The following VISUAL EVOKED POTENTIAL acquisition to be available:**

- VEP (Visual Evoked Potentials) with Pattern, Flash, Goggle and external stim options.
- ERG ( Electroretinogram) is optional
- ECO ( Electrooculogram) is optional

#### **Clause T4**

**The Amplifiers must meet the following requirements:**

##### **Clause T4.1**

The Amplifiers should be Electrically Isolated from the system.

##### **Clause T4.1**

The system should have at least 4 (four) Amplifiers.

##### **Clause T4.2**

The input **Input impedance to be: Greater than** 1000 Mohms / channel/ 8  $\mu$ F

**Clause T4.3**

**Noise:** The amplifier noise should be 0.6  $\mu\text{V}$  rms (1Hz – 10KHz or less) with the input shorted.

**Clause T4.4: Sensitivity to range from:**

1, 2, 5, 10, 20, 50, 100, 500  $\mu\text{V}/\text{div}$ .  
1, 2, 5, 10  $\text{Mv}/\text{div} + 5\%$ .

**Clause T4.5: Low-cut Filter to range from:**

0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100, 200, 500 Hz.  
1, 2, 3 Hz (6dB/Oct [-3dB + 20%]).

**Clause T4.6: High-cut Filter to range from:**

10, 20, 50, 100, 200, 500 Hz.  
1, 2, 3, 5, 10, 20 KHz (12 dB/Oct).

**Clause T4.7: Electro-to-skin impedance check to be provided with numerical display:**

2, 5, 10, 20 Kohms.

**Clause T4.8: An amplitude Calibration to be provided from:**

1, 10, 100  $\mu\text{V}$ .  
1, 10  $\text{mV}$

**Clause T4.9:**

**An AC interference notch filter to be provided with:**

50, 60 Hz (Rejection ratio less than 1/20).

**Clause T5:**

**The Averager must meet the following requirements:**

**Clause T5.1**

**The AD Converter should be at least 24 bit Sigma Delta**

**Clause T5.2**

**The Conversion Speed should be 10  $\mu\text{S}$  per channel or faster.**

**Clause T5.3: Analysis Time Base:**

A monitor time base between 50ms/div to 1s/div should be provided.

0.1, 0.2, 0.5, 1 S/div.

0.1, 0.2, 0.5, 1, 2, 3, 5, 10, 20, 50 mS/div.

**Clause T5.4****Time Base Mode:**

Individual selected for each channel.

**Clause T5.5**

**Number of averages: Sampling rate required at least 1 to 9999.**

**Clause T5.6**

An artifact rejection inhibit feature adjustable from  $\pm 1$  to  $\pm 5$  and off functionality should be provided.

**Artifact Reject Range:**

-1 to 1, -2 to +2, -3 to +3, -4 to +4, -5 to +5 div or off.

**Clause T6:**

**The Display must meet the following requirements:**

**Clause T6.1**

**Waveform Display Mode:**

Monitor Sweep and Average.

**Clause T6.2**

**Cursors:** at least 2 (two) time / amplitude.

**Clause T6.3**

**Scale:** 5, 10, 15, 20 div.

**Clause T6.4**

**Grid:** Line, Dot and Off.

**Clause T6.5**

**Resolution:** 1280 x 1024.

**Clause T7**

**The Stimulators must meet the following requirements:**

**Clause T7.1**

**Stimulator functions should include:**

Trigger Mode: Recurrent, Random and Foot Switch.

**Clause T7.2**

**Stimulation Modes should include:** Single, Double and Train.

**Clause T7.3**

**Stimulation Ratio:**

0.1 to 0.9 Hz in 0.1 Hz steps.

1 to 10, 13, 15, 17 Hz in 1 Hz steps.

20 to 100 Hz in 10 Hz steps.

**Clause T7.4**

Stimulation rates from 0.1Hz to 100Hz should be provided.

**Clause T7.5**

A stimulation delay from 0ms to 10s should be provided.

**Clause T8**

**THE ELECTRICAL STIMULATOR:**

**Clause T8.1**

The Stimulation intensity and control should be able to be done remotely from the stimulators itself (hand piece).

**Clause T8.2**

The Stimulation intensity should be able to be reset to 0mA with a push of a single dedicated hardware button.

**Clause T8.3**

The System should have 2 synchronized integrated simultaneous Electrical Stimulators.

**Clause T8.4**

**Clause T8.5**

The electrical stimulation pulse duration should be adjustable from 0.01 to 1 ms.

**Clause T9**

**Auditory Stimulator:**

**Clause T9.1**

**Number of Outputs:** at least 1 (one).

**Clause T9.2**

**Output Type:** The auditory stimulator should support Headphones and have a option for insert earphones

**Clause T9.3**

**Stimulation Mode:** The auditory stimulator should provide the following modes: Click, Tone and Burst.

**Clause T9.4**

**Stimulation Polarity:** The auditory stimulator should provide Condensation, Rarefaction and Alternating.

**Clause T9.5**

**Stimulation Intensity:** The auditory stimulation intensity should range from 0 to 132 dB SPL Sound Pressure in 1 dB steps (within  $\pm 2$  dB)

**Clause T9.6**

The auditory stimulator should provide **Contra-lateral White Noise Masking:**

0, -10, -20, -30, -40, -50 dB or off.

**Clause T9.7**

The auditory **Click Pulse Duration:**

0.1, 0.2, 0.3, 0.5, 1 mS in 0.1 ms steps.

**Clause T9.8**

The auditory tone burst frequency should be adjustable from 50Hz to 10KHz.

**Clause T9**

**Auditory Stimulator:**

**Clause T9.1**

**Number of Outputs:** at least 1 (one).

**Clause T9.2**

**Output Type:** The auditory stimulator should support Headphones and have a option for insert earphones

**Clause T9.3**

**Stimulation Mode:** The auditory stimulator should provide the following modes:  
Click, Tone and Burst.

**Clause T9.4**

**Stimulation Polarity:** The auditory stimulator should provide Condensation, Rarefaction and Alternating.

**Clause T9.5**  
**T9.9**

The auditory tone burst plateau time should be adjustable from 0 to 1000 ms in 1ms steps.

**Clause T9**

**Auditory Stimulator:**

**Clause T9.1**

**Number of Outputs:** at least 1 (one).

**Clause T9.2**

**Output Type:** The auditory stimulator should support Headphones and have a option for insert earphones

**Clause T9.3**

**Stimulation Mode:** The auditory stimulator should provide the following modes: Click, Tone and Burst.

**Clause T9.4**

**Stimulation Polarity:** The auditory stimulator should provide Condensation, Rarefaction and Alternating.

**Clause T9.5**

**T9.10**

The rise and fall time of the auditory tone burst should be adjustable from 0.1 to 3000 ms

**BIDDER'S COMMENTS:**

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**Clause T10  
The Visual Stimulator**

**Clause T9**

**Auditory Stimulator:**

**Clause T9.1**

**Number of Outputs:** at least 1 (one).

**Clause T9.2**

**Output Type:** The auditory stimulator should support Headphones and have a option for insert earphones

**Clause T9.3**

**Stimulation Mode:** The auditory stimulator should provide the following modes: Click, Tone and Burst.

**Clause T9.4**

**Stimulation Polarity:** The auditory stimulator should provide Condensation, Rarefaction and Alternating.

**Clause T9.5**

**T10.1**

**Visual Stimulator:** Pattern Reversal Monitor (size at least 17").

**CLAUSE T10.1**

Visual stimulation modes including Pattern reversal, LED goggles and External visual stimulation trigger should be provided.



## **CLAUSE T10.2**

The pattern reversal should support the following field formats: Full, left half, right half, upper half, lower half, upper left, lower left, upper right and lower right field, Checkerboard, horizontal bars and vertical bars.

## **Clause T10.3**

The number of horizontal divisions per pattern should support 4, 8, 16, 32, 64, 128

## **Clause T10.4**

The display time (duration) should vary from 20 to 1000 ms

## **Clause T10.5**

Flash stimulation using goggles with selectable full, left half and right half stimulation should be supported.

## **Clause T10.6**

The goggle flash stimulation should support display times of 20 to 1000ms.

## **Clause T10.7**

The system should provide for external signal inputs and outputs for connection to external equipment.

## **Clause T10.8**

The equipment should be able to operate in temperatures from 5 to 35°C and 20 to 80% relative humidity.

## **Clause T11**

**The EMG Software must be capable of the following:**

### **Clause T11.1**

Motor Unit Potentials Pattern Recognition.  
Turns / Amplitude Analysis.  
Single Fibre **EMG**.  
Macro **EMG**.  
Quantitative **EMG**.  
Autonomic Nervous System Test Software.  
Compression **EMG** for Tremor Measurements.  
Automatic **MUP** Pattern Recognition Algorithm.  
Measuring of Potential Duration.  
Slope = Rise Time.  
Firing Rate = **MUP** Discharge Frequency Amplitude.

### **Clause T11.2**

The following examination should be included as standard: Needle EMG with MUAP analysis

### **Clause T11.3**

Surface EMG must be available.

#### **Clause T11.4**

Real time storage of up to 99 sites of 300 seconds each of EMG waveforms

#### **Clause T11.5**

Post processing and review of EMG examinations should be possible.

#### **Clause T11.6**

The muscle name with EMG findings such as fibrillations, positive waves and fasciculation etc should be easily input during or after acquisition of EMG waveforms by selection from a table of preset items.

#### **Clause T11.7**

Single fiber and Macro EMG with the following capabilities should be offered

- Single Fiber EMG
- Stimulated Single Fiber EMG
- Macro EMG
- EMG Playback Software that allows playback of EMG files with sound on a PC for presentations and lectures with the following capabilities should be offered as an option
- EMG file has moving display with EMG sound up to 300 seconds
- Sweep speed, sensitivity, and filter setting can be changed.

#### **Clause T11.8**

Quantitative EMG Software with the following capabilities should be offered

- Realtime MUAP
- Interference Pattern Analysis Turns/Amp Analysis FFT Power Spectrum.

#### **Clause 12**

**The Nerve Conduction Software must be capable of the following:**

##### **Clause T12.1**

Nerve conduction studies:

Automatic **NCV** Evaluation, Latency, Latency Difference, Decrement, Amplitude, Calculation of Area and Interpretation.  
Motor and Sensory **NCV**, **CTS**, Blink Reflex, Myostenia, F Wave, T Reflex, Collision Test and Refraction, Period Measurements and Repetitive Stimulation.  
Auditory Brainstem Responses.  
Middle Latency Response.  
Slow Vertex Response.  
Electro-cockleogram.  
Customizable Auditory Protocol.  
Somatosensory Evoked Potential (**SSEP**).  
Short Latency (**SSEP**).  
Evoked Spinal Cord Potentials.  
Customizable Somatosensory Protocol.  
Visual (**VEP**) Pattern, Flash, Goggles and External.

Electro-retinogram.  
Electro-oculogram.  
Customization of Visual Protocol.

**Clause T12.2**

The system should provide a user selectable electrical artifact compensation system that uses 2 electrical stimulators to minimize stimulation artifact specifically for short latency studies.

**Clause T12.3**

An additional user selectable fast recovery stimulation artefact filter option should be provided

**Clause T12.4**

A dedicated Nerve conduction studies program with customizable tables of normals and the ability to select the nerve and type of test with just one click - with all results being available in one report should be provided.

**Clause T12.5**

The system should provide Automatic marking function for at least: NCV, MCS, SCS, and F-Response.

**Clause T12.6**

Repetitive stimulation:

The system should be able to perform a sequential tetanic test for the diagnosis of neuromuscular junction diseases.

**Clause T12.7**

This test should allow the change of settings for repetitive stimulation frequency, number of pulse trains and pause time between stimulation.

**Clause T12.8**

A quantitative comparison of chronological examinations should also be possible.

**Clause T12.9**

F-Wave - F wave analysis, where M and F waves can be displayed with their individual sensitivities on a split screen of different latencies, with their individual sensitivities on a split screen

**Clause T12.10**

Automatic F-wave marking of latency, minimum, maximum, average of amplitude, and frequency of occurrence should be calculated and displayed - a latency histogram should also be displayed

**Clause T12.11**

H- Reflex acquisition programme to be provided.

**Clause T12.12**

Blink reflex acquisition programme to be provided.

### **Clause T12.13**

The system should provide a fast semi-automatic marking function - when you manually mark the taking off point in NCS menu, the other marks (Peak, Bottom and Crossover points) are set automatically - this combines the speed of automatic marking with the collision studies.

### **Clause T13**

The unit must operate off 220 Volt + 10%, 50Hz, single phase a.c. supply and it is desirable that it is fused in the **LIVE or BOTH LIVE and NEUTRAL**.

### **Clause T14**

#### **EVOKED POTENTIALS:**

#### **Clause T14.1**

The following Somatosensory evoked potential acquisition must be available.

- SEP (Somatosensory Evoked Potential)
- SSEP (Short Latency SEP)
- ECG-SSEP (ECG-triggered SSEP)

#### **Clause T14.2**

This should provide stimulation and averaging during the flat period of the ECG waveform so artifact-free waveforms can be recorded.

#### **Clause T14.3**

BSCP (Evoked Spinal Cord Potential) acquisition to be available.

#### **Clause T14.4**

ABR (Auditory brainstem response) acquisition to be available.

#### **Clause T14.5**

During ABR automatic waveform marking of latency, amplitude, and interval should be provided to save time.

#### **Clause T14.6**

- The system should be able to perform a an automatic ABR threshold test with a single button press, including changing stimulation level, starting stimulation, and averaging and storing data for both ears.
- Latency vs. stimulation intensity graph should be automatically generated and printed selectable customizable normative values should be superimposed on the IL curve.
- VMLR( Middle Latency Response)
- SVR ( Slow Vertex Response)
- ABR and MLR should be able to be measured simultaneously on the same screen.

#### **Clause T14.7**

ECOCH G ( Electrocochleogram)

- During EcochG examinations, AP and CM should be automatically separated from the original waveforms in real time.
- The original, AP and CM waveforms should be simultaneously displayed on the screen

### **Clause T15**

Autonomic nervous system testing software should be offered as an option and should include the following functionality.

- Microneurography
- SSR (Sympathetic Skin Response)
- R - R Interval Analysis

### **Clause T16**

#### **REPORTS:**

#### **Clause T16.1**

A customizable Report Manager / Generator based on a Microsoft SQL Database should be provided as standard, this should allow quick generation of reports, with scalable graphics and customizable single click quick findings.

#### **Clause T16.2**

A screen hardcopy report should be provided.

#### **Clause T16.3**

Reports Should have options to include waveform graphics, numerical values and a combination of both.

### **Clause T17**

#### **Clause T17.1**

The system should have a large data storage capacity.

#### **Clause T17.2**

The system should have an integrated database of patient tests.

#### **Clause T17.3**

The system should provide a data backup / Archive function to CR-R/RW or USB to an external hard drive.

#### **Clause T17.4**

The System should be able to display multiple screens at the same time, such as the monitor screen, sweep screen and average screen, so you can review different time bases simultaneously.

### **Clause T18**

Should a video/VCD/DVD on the operation of the unit be available it must be offered with the item.

### **Clause T19**

The bidder must undertake to quote on all accessories that will be required in order that the unit could be put into operation immediately after delivery.

**Clause T20**

**SAFETY:**

**Clause T20.1**

The device should conform to the following safety requirements:

IEC60601-1 (1988-12), IEC60601-1 Amendment 1 (1991-11), IEC60601-1

Amendment 2 (1955-03), IEC60601-1-1 (1992-06), IEC60601-1-1, Amendment 1 (1995-10), IEC60601-2-40 (1998), IEC60601-1-2 (1993), EN60601-1-2 (1993-05)

**BIDDER'S COMMENTS:**

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**Clause T20.2**

Type of protection against electric shock: class I

**Clause T20.3**

Degree of protection against electric shock: BF

**Clause E T20.4**

Mode of operation should be rated for continuous operation.

**Clause T22**

The bidder must specify all the standard accessories that will be supplied with the quoted unit at no extra cost. A list of all optional accessories, clearly stating the price thereof, must also be submitted by bidders.

**Clause T23**

**GUARANTEE/WARRANTY**

The bidder must provide a warranty/ guarantee of minimum 24 months period.

**Clause T24**

**MAINTENANCE AND SERVICE AGREEMENT**

Upon termination of the guarantee / warranty period the bidder must provide a fully - costed FULLY COMPREHENSIVE MAINTENANCE AND SERVICE AGREEMENT for a period of 5 years to commence upon termination of the guarantee / warranty period with an option to enter into a renewable agreement.



# DETAILED TECHNICAL SPECIFICATION

## GENERAL INFORMATION REQUIRED

**FAILURE TO COMPLETE THIS PART WILL DISQUALIFY THE BIDDER**

Make: \_\_\_\_\_

Model Number / Part Number for: \_\_\_\_\_

Country of Origin \_\_\_\_\_

Delivery Period \_\_\_\_\_

R S A Import Permit Holder (License No) \_\_\_\_\_

Bidder \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Contact Person \_\_\_\_\_  
(Please Print)