

Bid Document

| Bid Details | |
|--|---|
| Bid End Date/Time | 20-07-2020 12:00:00 |
| Bid Opening Date/Time | 20-07-2020 12:30:00 |
| Bid Life Cycle (From Publish Date) | 90 (Days) |
| Bid Offer Validity (From End Date) | 75 (Days) |
| Ministry/State Name | Ministry Of Defence |
| Department Name | Department Of Defence Reseach & Development |
| Organisation Name | Office Of Dg (Is) |
| Office Name | ***** |
| Total Quantity | 2 |
| Item Category | Water Quality Meters / Analyzers |
| MSE Exemption for Years of Experience and Turnover | No |
| Startup Exemption for Years of Experience and Turnover | No |
| Bid to RA enabled | No |
| Inspection Required | No |

EMD Detail

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| Required | No |
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ePBG Detail

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| Required | No |
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Splitting

Bid splitting not applied.

Water Quality Meters / Analyzers (2 pieces)

Technical Specifications

* As per GeM Category Specification

| Specification | Specification Name | Values | Bid Requirement (Allowed Values) |
|--|--|--|---|
| TYPE / NOMENCLATURE / PROTECTION | Type of Meter / Analyzer | Handheld | Handheld |
| | Functional nomenclature | Multi Parameter Water Quality Analyzer | Dissolved Oxygen Meter, Salinity Meter, ORP Meter, TDS Meter, Turbidity Meter, pH Meter, Multi Parameter Water Quality Analyzer |
| | Ingress Protection (Main Unit) | IP 67 | IP 67 |
| | Calibration | Automatic | Automatic |
| MEASURED WATER QUALITY PARAMETERS | Dissolved Oxygen (DO) | No | Yes, No |
| | DO % Stauration | No | Yes, No |
| | Conductivity | Yes | Yes |
| | Resistivity | No | Yes, No |
| | Salinity | Yes | Yes |
| | Total Dissolved Solids (TDS) | Yes | Yes |
| | pH | Yes | Yes |
| | Oxidation Reduction Potential (ORP) | No | Yes, No |
| | Ammonium | No | Yes, No |
| | Nitrate | No | Yes, No |
| | Chloride | No | Yes, No |
| | Turbidity | No | Yes, No |
| | Depth | No | Yes, No |
| | Temperature | Yes | Yes |
| | Atmospheric Pressure | No | Yes, No |
| MEASUREMENT OF DISSOLVED OXYGEN (DO) / DO % Saturation | Dissolved Oxygen (DO) measurement Principle | NA | Optical, Electro Chemical (Amperometric), NA |
| | Sensor / Probe/ Electrode Type | NA | Lifetime Luminiscent for Optical, Polarographic for Electro Chemical, Galvanic for Electro Chemical, NA |
| | Measurement Range for DO Content (in | NA | * |

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| | ppm or mg/l) | | |
| | Resolution (in ppm or mg/l) | NA | * |
| | DO Accuracy (+/-) | 0 | * |
| | Measurement Range for DO % Saturation (in %) | NA | 0-200, 0-400, 0-500, 0-600, 0-800, NA |
| | Resolution (in %) | NA | * |
| | DO % Accuracy (+/-) | 0 | * |
| MEASUREMENT OF CONDUCTIVITY (EC) | Conductivity measurement principle | Conductive (contacting) | Conductive (contacting), Inductive, NA |
| | Sensor/ Probe/Electrode Type | 4 Cell Electrode | 4 Cell Electrode |
| | Material of Electrode | Graphite | Graphite |
| | Measurement Range (in $\mu\text{S/cm}$) | 0-200 | 0-200 |
| | Resolution (in mho or $\mu\text{S/cm}$) | 0.01 | * |
| | EC Accuracy (+/-) | 0.01 | * |
| MEASUREMENT OF RESISTIVITY | Resitivity measurement principle | NA | Conductivity Conversion, NA |
| | Lowest Measurement Value for Resistivity (in ohm-cm) | NA | 0, 1, 2, 5, 10, NA |
| | Highest Measurement Value for Resistivity (in Mega ohm-cm) | NA | 1, 2, 5, 10, 20, 50, 100, 200, NA |
| | Resolution (in ohm-cm) | NA | * |
| | Resistivity Accuracy(+/-) | 0 | * |
| MEASUREMENT OF SALINITY | Salinity measurement principle | Conductivity Conversion | Conductivity Conversion, NA |
| | Measurement Range (in parts per thousand or g/l or PSU) | 0-100 | 0-100 |
| | Resolution (in g/l) | 0.1 | * |
| | Salinity Accuracy (+/-) | 1 | * |
| MEASUREMENT OF | TDS measurement | Conductivity | Conductivity |

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| TOTAL DISSOLVED SOLIDS (TDS) | principle | Conversion | Conversion, NA |
| | TDS Measurement Range (in parts per thousand or g/l) | 0-100 | 0-100 |
| | Resolution (in g/l) | 0.1 | * |
| | TDS Accuracy (+/-) | 1 | * |
| MEASUREMENT OF pH | pH measurement principle | Electro chemical | Electro chemical, NA |
| | Sensor / Probe / Electrode Type | Glass Electrode | Glass Electrode |
| | Number of Sensors / Electrodes | Single Electrode | Single Electrode |
| | pH Measurement Range | 0-14 | 0-14, NA |
| | Resolution (in pH number) | 0.01 | * |
| | pH Accuracy (+/-) | 0.01 | * |
| MEASUREMENT OF OXIDATION REDUCTION POTENTIAL (ORP) | ORP measurement principle | NA | Electro chemical, NA |
| | Sensor / Probe/ Electrode Type | NA | Platinum Electrode, Ion Selective Electrode (ISE), NA |
| | Number of Sensors /Electrodes | NA | Single Electrode, Combination Electrode (2 Electrode), Differential Electrode (3 Electrode), NA |
| | Lowest Measurement Value for ORP (in mV) | NA | -3000, -2500, -2000, -1500, -1000, -500, 0, NA |
| | Highest Measurement Value for ORP (in mV) | NA | 3000, 2500, 2000, 1500, 1000, 500, NA |
| | Resolution (in \pm mV) | NA | * |
| | ORP Accuracy (+/-) | 0 | * |
| MEASUREMENT OF AMMONIUM | Sensor / Probe/ Electrode Type | NA | Ion Selective Electrode, NA |
| | Measurement Range (in ppm or mg/l) | NA | 0-100, 0-200, 0-300, 0-400, 0-500, 0-600, NA |
| | Resolution (in ppm or mg/l) | NA | * |
| | Ammonium Accuracy (+/-) | 0 | * |
| MEASUREMENT OF NITRATE | Sensor / Probe/ Electrode Type | NA | Ion Selective Electrode, NA |

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| | Measurement Range (in ppm or mg/l) | NA | 0-100, 0-200, 0-300, 0-400, 0-500, 0-600, NA |
| | Resolution (in ppm or mg/l) | NA | * |
| | Nitrate Accuracy (+/-) | 0 | * |
| MEASUREMENT OF CHLORIDE | Sensor/Probe/Electrode Type | NA | Ion Selective Electrode, NA |
| | Measurement Range (in ppm or mg/l) | NA | 0-400, 0-600, 0-800, 0-1000, 0-1200, 0-1500, NA |
| | Resolution (in ppm or mg/l) | NA | * |
| | Chloride Accuracy (+/-) | 0 | * |
| MEASUREMENT OF TURBIDITY | Turbidity measurement principle | NA | Nephelometric measurement according to ISO 7027, Nephelometric measurement according to US EPA 180.1, NA |
| | Light Source | NA | Infrared Led, White light tungsten lamp, NA |
| | Measurement of scattered light | NA | 30 degree scatter nephelometer, 90 degree scatter nephelometer, NA |
| | Lowest Measurement Value for Turbidity (in FNU or NTU) | NA | 0.01, 0.05, 0.1, 0.5, 0, NA |
| | Highest Measurement Value for Turbidity (in FNU or NTU) | NA | * |
| | Resolution (in FNU or FTU) | NA | * |
| | Turbidity Accuracy (+/-) | 0 | * |
| MEASUREMENT OF TEMPERATURE | Sensor/Probe Type | NA | Semi Conductor Based Thermister, Resistance Temperature (RTD) Detector, NA |
| | Lowest Measurement Value for Temperature (°C) | 0 | -20, -15, -10, -5, 0, 5, 10, NA |
| | Highest Measurement Value | 100 | * |

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| | for Temperature (°C) | | |
| | Resolution (°C) | 0.1 | * |
| | Temperature Accuracy (+/-) | 0.5 | * |
| MEASUREMENT OF PRESSURE | Sensor /Probe Type | NA | Pressure transducer, NA |
| | Lowest Measurement Value for Pressure (in mmHg) | NA | * |
| | Highest Measurement Value for Pressure (in mmHg) | NA | 800, 825, 850, 875, 900, 950, 1000, NA |
| | Resolution (in mmHg) | NA | * |
| | Pressure Accuracy (+/-) | 0 | * |
| MEASUREMENT OF DEPTH | Measurement Method | NA | Water Pressure method, NA |
| | Depth Measurement Range (in meters) | NA | * |
| | Length of Cable connecting peobe (inclusive in the scope of supply) | 0 | * |
| COMPENSATION / CORRECTION | Temperature correction | Automatic | Automatic |
| | Salinity Correction | Automatic | Automatic |
| | Barometric Pressure correction | NA | Automatic, Manual, Automatically compensates for manual input value, NA |
| DISPLAY / STORAGE | Type of Display | LCD | * |
| | Display Digit Size | 30 | * |
| | Number of Digits in Display | 3.5 | * |
| | Number of parameters diplayed simultaneously | 2 | * |
| | Memory (in Data Sets) | 0 | * |
| | Internal memory (GB) | 0 | * |
| | In-built GPS | No | * |
| | Date /time Stamp in Entries | No | * |
| | Connectivity interface | NA | * |

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| POWER SOURCE | Power Source | Alkaline Batteries (Non-Rechargeable) | * |
| | Battery Size, if Non Rechargeable Battery | NA | * |
| | Battery Chemistry, if Rechargeable Battery | NA | * |
| | Voltage of each Battery | 1.5 | * |
| | Number of Batteries required for operation | 4 | * |
| | Number of Batteries Inclusive in the Scope of Supply | 4 | * |
| | Battery Capacity (mAh) | 0 | * |
| | Battery Life | 200 | * |
| | Suitable Adapter to be supplied to make the equipment Work on 230 V \pm 10 %, 50 Hz | No | * |
| GENERIC | Armour housing of Sensor / Probe | Plastic | * |
| | Probe / Sensor / Electrode supplied with equipment | Yes | * |
| | Number of elctrodes supplied | 4 | * |
| | Weight | 90 | * |
| | Dimensions (mm x mm x mm) | - | * |
| | Carry Case included in the scope of supply | Yes | * |
| | Any other features | - | * |
| | List of Items and Quantity of each item included in the offer | - | * |
| OPERATING CONDITIONS | Minimum Operating Temperature | 0 | 0.0 |
| | Maximum Operating Temperature | 50 | 50.0 |
| | Operating Humidity, Rh at 40 deg C | 65 | 65.0 |
| WARRANTY | Warranty on Equipment | 1 | 1.0 |
| | Warranty on Probe / Electrode | 6 | 6, 12, 18, 24, 30, 36, 48 |
| | Warranty on Cables | 1 | 1.0 |

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| | for Connecting Probe | | |
| CERTIFICATION | Availability of Test Reports from Central Govt / NABL approved / ILAC accredited Lab to prove conformity to the specification | No | Yes, No |
| | If Yes, Test Report to be furnished to the Buyer on demand | NA | * |
| | Test Report No and Date | - | * |
| | Name of the Lab and Address | - | * |

* Specifications highlighted in bold are the Golden Parameters.

* Bidders may note that In respect of non-golden Parameters, the specifications 'Values' chosen by Buyer will generally be preferred over 'Bid requirement (allowed Values) by the Buyer.

Additional Specification Documents

Consignees/Reporting Officer and Quantity

| S.No. | Consignee/Reporting Officer | Address | Quantity | Delivery Days |
|-------|-----------------------------|--------------|----------|---------------|
| 1 | ***** | *****GWALIOR | 2 | 30 |

Bid Specific Additional Terms and Conditions

1. Scope of supply (Bid price to include all cost components) : Only supply of Goods
2. The buyer organization is an institution eligible for concessional rates of GST as notified by the Government of India. The goods for which bids have been invited fall under classification of GST concession and the conditions for eligibility of concession are met by the institution. A certificate to this effect will be issued by Buyer to the Seller after award of the Contract. Sellers are requested to submit their bids after accounting for the Concessional rate of GST. Applicable Concessional rate of GST : 5%
Notification No.and date : MP State Govt. Notification No. FA-3-81-2017-1-V(144), 45/2017- Central Tax (Rate), 47/2017- Integrated Tax (Rate) dated 14/11/2017
3. Preference to Make In India products (For bids less than 200 Crore):Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document 50%. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company

and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.

[This Bid is also governed by the General Terms and Conditions](#)

---Thank You---