



संख्या: ऊकृमंडी-14021/JE(HQ)/2015/202-05

दिनांक: 03/04/2019

TCIL Reference No: CWC-2019-TN000107

E-Bidding / ई-बोली

The Executive Engineer, Upper Krishna Division, Central Water Commission, Pune on behalf of the President of India invites bid by e- tendering from the bonafide / Govt. Approved firms for the following Hydro Metrological items and as per the terms and condition given below:

Sl. No.	Particulars of Items	Qty.	Remark
1	Maximum & Minimum Thermometer	26 No's	Mlabs Zeal
2	Dry Bulb and Wet Bulb Hygrometer (Zeal)	12 No's	Mlabs Zeal
3	Hygograph, Hair String Type	01 No's	As Per Specification Enclosed
4	Thermograph, Bimetallic Type	01 No's	As Per Specification Enclosed
5	Sunshine Recorder	01 No's	As Per Specification Enclosed
6	Evaporimeter, Us Class A Pan	01 No's	As Per Specification Enclosed
7	Digital Presetable Revolution & Time Counter with double displays with Cable	20 No's	As Per Specification Enclosed
8	Counter Type Anemometer (Mech)	15 No's	As Per Specification Enclosed
9	Electronic Stop Watch	06 No's	As Per Specification Enclosed
10	Stevenson Screen (Double width) with Stand	01 No.	Quotation without stand will be rejected
11	Wind Wane	06 No's	As Per Specification Enclosed
12	1.5 m Wading Rod with Base Plate	06 No's	With 10mm graduations
13	SRG Standard Rain Gauge Non-Recording 100 cm Model (02 no's of Glass Borosil rain measure Cylinder to be supplied with each SRG for 20 mm rainfall)	01 No.	As per the Specification & Accessories enclosed.
14	Rain Gauge Autographic (Siphon Type)	01 No.	As per the Specification & Accessories enclosed.
Note: The suppliers may quote their rates for one item or for all items.			

Terms & Conditions:

- Electronic Tenders are to be submitted on TCIL's e-Tendering portal which can be accessed using URL <https://www.tcil-india-electronictender.com>. The tenders received other than on TCIL will not be entertained.
- Bids shall be accepted through e-procurement only at e-tendering portal of TCIL <https://www.tcil-india-electronictender.com>.
- Pass Phrase** to open the bid on TCIL portal will be provided by the firm to this office by email at ukdcwc@gmail.com, after 25/04/2019 and before tender opening event on TCIL portal.
- The Competent Authority, for and on behalf of President of India, does not bind itself to accept the lowest or any other tender, and reserves its right to reject any or all of the tenders received or cancel the tendering process at any stage, either in part or full, without assigning any reason. All tenders, in whom any of the prescribed conditions are not fulfilled or are incomplete in any respect, are liable to be rejected.

5. **The Tenders received will be opened on 25/04/2019 at 15:30 Hrs. on TCIL Portal in the presence of Bidders or their representatives, if present.**
6. The Tender document for free can also be downloaded from websites @ www.eprocure.gov.in <http://www.cwc.gov.in> , www.tcil-india-electronictender.com.
7. **The rates should be F.O.R. destination at addresses given in price bid and inclusive of all taxes/charges including GST / Service Tax / Transport charges / insurance / etc.**
8. Quotationers must have **PAN / TIN / Service Tax Number / GST No.**
9. Photocopies of Authorized Dealership Certificate from manufacturer should be enclosed along with the quotations.
10. The suppliers may quote their rates for one item or for all items.
11. The material must be of standard quality and as per specifications and free from all defects. The material if found defective subsequently or not conforming to the specifications as stated above, have to be replaced by the firm without any additional charges.
12. **The material shall have an on Site warranty of minimum one year from the date of supply or as provided by the manufacturer, whichever is higher.**
13. The undersigned does not bind him to accept the lowest quotation and reserve the right to accept or reject any or all the quotations without assigning any reason thereof.
14. Rates quoted should be valid at least for 90 days from the date of opening.
15. The quantity of materials may be increased or decreased at the time of supply order.
16. The rate should be quoted both in words and figure.
17. Material should be supplied within 60 days from the date of supply order.
18. The payment will be made by PFMS on production of pre-receipted bill along with account details in triplicate only after satisfactory supply of the materials in good condition and as per specification.
19. **Security deposit @ 2.5% of the total amount will be deducted from the bill and the same will be released after 30 days beyond the completion of warranty period.**

-Sd-

अधिशसी अभियंता / Executive Engineer
ऊपरी कृष्णा मंडल / Upper Krishna Division

प्रतिलिपि:

1. The Superintending Engineer, Krishna & Co -Ordination Circle, Central Water Commission, Hyderabad for information please. **(By Email)**
2. The AAO, Accounts Branch, UKD, CWC, Pune.
3. TCIL Portal, CPP Portal, CWC Website & Concerned firm for wide publicity.
4. Notice Board of Upper Krishna Division, CWC, Pune.

PRICE BID PROFORMA

Sl. No.	Particulars of item	Qty.	Unit Rate	GST	Amount inclusive of GST and Transportation
1	Maximum & Minimum Thermometer	26 No's			
2	Dry Bulb and Wet Bulb Hygrometer (Zeal)	12 No's			
3	Hygrograph, Hair String Type	01 No's			
4	Thermograph, Bimetallic Type	01 No's			
5	Sunshine Recorder	01 No's			
6	Evaporimeter, Us Class A Pan	01 No's			
7	Digital Presetable Revolution & Time Counter with double displays with Cable	20 No's			
8	Counter Type Anemometer (Mech)	15 No's			
9	Electronic Stop Watch	06 No's			
10	Stevenson Screen (Double width) with Stand	01 No.			
11	Wind Wane	06 No's			
12	1.5 m Wading Rod with Base Plate	06 No's			
13	SRG Standard Rain gauge Non-Recording 100 cm Model 02 no's of Glass Borosil rain measure Cylinder to be supplied with each SRG for 20 mm rainfall.	01 No.			
14	Rain Gauge Autographic (Siphon Type)	01 No.			
Grand Total including GST & Transportation Charges =					
(.....)					

The suppliers may quote their rates for one item or for all items.

I agree that I will transport the materials at the given address as per the rate quoted in Price bid and as address given.

Date:

Signature of authorized person

The Rate should be quoted in above given format. The Rates should be F.O.R. destination at given addresses UKD, CW,C Pune and inclusive of all taxes GST / Service Tax / Transport charges/ Insurance / Etc.

Place of Supply

Addresses: UKD, CWC, Pune: 2nd Floor, Upper Krishna Division, Central Water Commission, National Water Academy Complex, Kirkatwadi Road, Khadakwasla RS., Pune- 411024. Contact No: 020-24380073, 9164188595.

Specification for Items

1. LIQUID IN GLASS THERMOMETERS

Conditions & Requirements;

- The thermometers shall comply with IS 5681-1983.
- The delivery shall include matching muslin wicks for the wet-bulb measurements, in a number sufficient for one year of continuous operation.

Specifications

1. Maxi-Min Thermometer

2. Dry and Wet Bulb Measurements



Mlabs Zeal

2. HYGROGRAPH, HAIR STRING TYPE

Purpose;

To have continuous and permanent records of the atmospheric humidity at a place

Conditions & Requirements

- The general arrangement and main dimensions of the hair hygrograph and charts shall comply with IS5900-1970.

Specifications;

Range 0 to 100% RH accuracy above 20%: 5% RH recording resolution $\pm 0.2\%$ RH housing material FRP or aluminum recording mechanism drum, driven by clockwork.

3. THERMOGRAPH, BIMETALLIC TYPE

Equipment Specification: THERMOGRAPH, BIMETALLIC TYPE Version 1 30.009-1/1

Purpose: To measure air temperature continuously and to have permanent record of air temperature at a place.

Conditions & Requirements: The general arrangement and main dimensions of the thermograph and charts shall comply with IS 5901-1970

Specifications;

Range: 20 to 60 °C

Accuracy: 1 °C

Recording Resolution: 0.2 °C

Housing Material FRP or Aluminum

Recording Mechanism: drum, driven by clockwork.

4. SUNSHINE RECORDER

Purpose: Accurate measurement of the duration of bright sunshine at a place

Conditions & Requirements: The sunshine recorder and cards shall comply with IS 7243-1974 • Civil works will be finalized in collaboration with the supplier

Specifications;

Size base 200 mm, sphere radius 79.6 mm base good quality marble or similar stone, black or white sphere uniform and well annealed glass and having a focal length of 74.9 ± 0.25 mm bowl tin bronze pivot brass

Sunshine Cards, made of white paste board

Properties when dry after immersion in water for 18 hours after drying. Length down board 127 mm 127 mm not less than 125.7 mm width across board 25.4 mm not more than 25.9 mm not less than 25.1 mm thickness 0.43 to 0.48 mm not more than 0.76 mm.

5. EVAPORIMETER, US CLASS A PAN

Purpose: Estimation of evaporation from the surface

Conditions & Requirements: The pan shall comply with IS 5973 - 1970. • Civil works will be finalized in collaboration with the supplier.

Specifications:

Pan Size 1.22 x 0.255 m (diameter x height)

Accuracy of reading 0.1 mm

Pan Evaporimeter copper sheet of thickness 1.0 ± 0.1 mm point gauge and still well brass 2. Measuring cylinder material clean cast seamless acrylic plastic tubing or brass sheet bottom plate acrylic plastic sheet thermometer clamp brass platform rot resistant timber treated with creosote or other effective wood preservative inner diameter 122 mm graduation in cm.

6. DIGITAL PRESETABLE REVOLUTION & TIME COUNTER WITH DOUBLE DISPLAY WITH CABLE

With 10 facilities of current time and pulse measurement

Specifications: Digital counter : Electronic Counter Display Counting Frequency Max 20 pulse per second and bounce input Counting range : Upto 999 Counting Resolution: 1 count Pre-set Time pulse counting Time range : Upto 999 second Time Resolution : 1 second Pre-set pulse counting Time range : Upto 999 second Time Resolution : 1 second

Power supply : Standard Dry cell(s). (e.g.: -AA, Cor 0 size 4 nos. 6v) Clock : Quartz clock

Display : Double Display , (Separately for Time and Revolution Count) Good Readability in day light Operating

Temperature : 0° to 60°C

Humidity : 95%

Cable Length: **10 m**

Enclosure: Rigid Portable Splash Proof.

7. COUNTER TYPE ANEMOMETER (Mech)

Purpose: The anemometer will be used to measure wind travel by counting revolutions of a cup assembly.

Conditions & Requirements:

- The instrument shall be of such a design that it operates reliably and accurately under the prevailing environmental and weather conditions.
- The instrument shall be easy to operate and maintain.
- The instrument shall be supplied with the accessories as needed for effective deployment.
- All materials on the instrument exterior shall be non-corrosive.
- The instrument shall have an expected technical lifetime of not less than 10 years.
- The instrument shall be capable to operate for at least 3 months without any servicing.
- An operator's manual, related to the type and model of the instrument, shall be part of the delivery.
- A suitable non-reset direct-drive revolution counter adding one count for each one-tenth revolution of the drive shaft in one direction shall be used.
- The ratio between gears shall be such that 1 count equals 100 m/s.
- The anemometer shall comply to IS 5912-1970.
- Civil works will be finalized in collaboration with the supplier.

Specifications:

1. Sensing range 50 m/s accuracy up to 2.5 m/s, 0.25 m/s above 2.5 m/s, 10% FS

2. Materials cups copper or aluminum sheet 0.71 mm thickness centre spindle stainless steel rod worm on spindle manganese bronze alloy worm wheel hard brass.

8. ELECTRONIC STOPWATCH

Purpose: The electronic stopwatch will be used during discharge measurements with ‘rotating element’ Current meters and during pumping tests. The revolution counter integration time and the time lapsed from the starting of pumping at specified intervals of time will be measured with the stopwatch.

Conditions & Requirements:

- The instrument shall be compatible with the environment of operation.
- The instrument shall be adequate for the application and the mode of working.

Specifications:

Range stopwatch >59 minutes

Range count down 59 minutes

Resolution 0.1 s

Accuracy 0.1 s over 1 hour

Stopwatch modes lap time, split time

Display LCD, good visibility in daylight

Enclosure water resistant

Power supply standard button cell(s)

Battery lifetime >1 year

Instrument life time >5 years of operation

Temperature range 0 to 50 °C

Robustness the instrument shall survive several drops on concrete

Housing: splash waterproof

Consumables: Batteries

9. STEVENSON SCREEN

Purpose: To protect from direct sun-shine and to provide a universal enclosure to allow for inters station data comparison.

Conditions and requirements:

Double layered roof with ventilation provision.

- The screen shall comply with IS 5948 – 1970.
- All dimension requirements shall be met within 5% of specified dimension.
- The screen colour shall be white (to reduce the heating effect of solar radiation)

Specifications:

Double width:

Length between inner slats of louvers 1325 mm

Width between inner slats of louver 315 mm

Height between middle of lower roof and floor 412 mm

10. WIND WANE / WIND DIRECTION INDICATOR

Purpose: The wind vane will be used as a visual aid to indicate wind direction.

Conditions & Requirements:

The instrument shall be of such a design that it operates reliably and accurately under the prevailing environmental and weather conditions. The instrument shall be easy to operate and maintain. The instrument shall be supplied with the accessories as needed for effective deployment. All materials on the instrument exterior shall be non-corrosive. The instrument shall have an expected technical lifetime of not less than 10 years. The instrument shall be capable to operate for at least 6 months without any servicing. An operator’s manual, related to the type and model of the instrument, shall be part of the delivery. When the complete instrument on final assembly is held firm at bottom and the balance weight imparted an impact by a hammer with a mass of 0.72 kg and having a handle length of 240 mm, it shall make no less than five and not more than ten complete revolutions. The general arrangement and main dimensions of wind vane shall comply with IS 5799:1970. • Civil works will be finalized in collaboration with the supplier.

Specifications:

Pointer counter balanced direction arms 8, with direction letters for N, E, S, W mounting materials aluminum (ring for direction arm, arm support & horizontal arm) fin & bearing housing cap aluminum alloy spindle brass direction letters galvanized steel painted red.

11. SRG RAIN GAUGE - NON RECORDING

The rain gauge will be used to collect precipitation in a recipient for quantitative measurement.

Conditions & Requirements:

- The rain gauge shall be of such a design that it operates reliably and accurately under the prevailing environmental and weather conditions.
- The rain gauge shall be easy to operate and maintain.
- The rain gauge shall be supplied with the accessories as needed for effective deployment.
- All materials on the rain gauge shall be non-corrosive.
- **The locking ring shall be of rigid plastic**
- The rain gauge shall have smooth and permanent surface finish to minimize evaporation losses.
- The minimum expected lifetime in open field shall be 15 years.
- All openings of the rain gauge shall be covered with stainless steel net to protect against any insects entering inside.
- The rain gauge shall comply with IS 5225-1992

Specifications:**1. 100 cm Model**

Collecting area 100 cm²

ID of rim 112.9 mm

Collecting bottle 4 litres

Nominal capacity 400 mm

Rain measure for 20 mm rainfall, graduation etc. according to IS 5225-1992 **Borosil Brand**

Civil Works: Civil works will be finalized by the engineer in charge in collaboration with the supplier.

12. RAIN GAUGE AUTOGRAPHIC (SIPHON TYPE)

The autographic rain gauge will be used for routine rainfall measurements. The records will be used to assess rain intensity and accumulated rainfall.

Conditions & Requirements:

- The rain gauge shall be of such a design that it operates reliably and accurately under the prevailing environmental and weather conditions.
- The rain gauge shall be easy to operate and maintain.
- The rain gauge shall be supplied with the accessories as needed for effective deployment.
- All materials on the rain gauge shall be non-corrosive.
- The rain gauge shall have smooth and permanent surface finish to minimize evaporation losses.
- The minimum expected lifetime in open field shall be 15 years.
- All openings of the rain gauge shall be covered with stainless steel net to protect against any insects entering inside.
- The siphoning system shall function reliably and with good repeatability.
- The clock shall be sufficiently power full to reliably drive the recording drum during the specified recording period.
- The rain gauge shall comply with IS 5235-1992.

Specifications:**1. 130 cm² Collector**

Size 130 cm² x 67.5 cm ± 0.3 cm (Area x H)

ID of rim 128.5 to 128.8 mm

Range 25 mm, collecting area 130 cm²

Funnel depth 175 mm from edge of rim

ID of funnel outlet pipe 10 mm

Float height for discharge 60 mm

Clock drum diameter 93.3 mm

Drum height above flange 92 mm

Clock accuracy 1 minute/day

Clock autonomy 32 hours

Siphoning duration not exceeding 15 seconds

Civil Works: Detail to be supplied by supplier