



## PURCHASE OF 3,000 PIECES 15 MM DN MULTI-JET BRASS WATER METER

Project Title: **Purchase of Three (3,000) pieces 15 mm DN multi-jet brass water meter.**  
 ABC: **Php 7,500,000.00**  
 Owner: **General Santos City Water District**  
 Scope of Work: **The scope of work shall be the supply, delivery and testing of water meters to General Santos City Water District.**

| I. GENERAL REQUIREMENTS |                    |  |                         |
|-------------------------|--------------------|--|-------------------------|
| A.                      | NOMINAL DIAMETER   | 15 MM  | STATEMENT OF COMPLIANCE |
| B.                      | METER TYPE         | Multi-Jet, Velocity Type   |                         |
| C.                      | METROLOGICAL CLASS | "B" or equivalent to its latest edition  |                         |
| D.                      | METER BODY         | Copper alloy containing not less than 57% copper.  |                         |
| E.                      | METER DESIGN       | Flow is bi-directional ( <i>no non-return valve at outlet portion</i> )  |                         |
|                         |                    | Meter registry is irreversible   |                         |
|                         |                    | Hermetically sealed register and it must be encapsulated to prevent moisture from entering. It must be anti-magnetic container made of Copper Tin Can with not less than 99.0% Copper.   |                         |
|                         |                    | Anti-magnetic type   |                         |
|                         |                    | Glass assembly cover thickness is $\geq 5\text{mm}$ .  |                         |
|                         |                    | Only impeller is in contact with the water to prevent wear and tear of the inner mechanism.  |                         |
|                         |                    | Meter capacity should be placed preceded by the letter "N" or Qn or as defined by ISO 4064 equivalent edition  |                         |
|                         |                    | Meter Register in Cubic Meters, minimum of four (4) digit registration.  |                         |
| F.                      | DIMENSION          | It has an anti-theft and tampering mechanism in order to prevent and easily identify any meter fraud attempt. It shall have a component or feature aside from the meter seal which cannot be disassembled without breaking it. |                         |
|                         |                    | Length without tailpieces = 165mm with $\pm 5\text{mm}$ tolerance  |                         |
|                         |                    | Tailpiece length = 75 mm with $\pm 5\text{mm}$ tolerance, 2 pcs  |                         |
|                         |                    | Width of 75mm to 90mm  |                         |
|                         |                    | Height of 100mm to 120mm (meter cap in closed position)  |                         |
| G.                      | WORKING CONDITION  | Weight without tailpiece = 0.87 kg to 1.1 kg   |                         |
|                         |                    | Maximum Working Pressure: $\leq 16$ bars   |                         |
| H.                      |                    | Water Temperature: The meter can work without deterioration on temperature at local climate  |                         |
|                         |                    | Minimum Flowrate (Qmin) = $0.03 \text{ m}^3/\text{h}$ ; $\pm 5\%$  |                         |



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|           | <b>METROLOGICAL CHARACTERISTICS (MINIMUM PERFORMANCE)</b> | Transitional Flowrate (Qt) = 0.12 m <sup>3</sup> /h; ±2 %  |  |
|           |   | Maximum Flowrate (Qmax) = 3.0 m <sup>3</sup> /h; ±2 %  |  |
|           |   | Nominal Flowrate (Qn) = 1.5 m <sup>3</sup> /h; ±2 %  |  |
|           |   | <i>Note: Application of flowrates during testing will be based on its Metrological Class</i>   |  |
| <b>I.</b> | <b>EFFICIENCY TEST</b>                                    | a.) The bidders are required to submit ten (10) water meters all with tailpiece per model/brand. Eight (8) water meters will be tested for Efficiency Test using GSCWD Test Bench at Transitional and Minimum Flow. The ninth water meter shall be a cut-out model and expected to reveal the inner mechanism. The tenth water meter will be dismantled for examination. |  |
|           |   | b.) The ten (10) water meter is part of the pass/fail criterion. All water meters presented must have tailpieces. If ever the bidder is not able to present the water meters on the Deadline for Submission of bids, they shall be declared failed in the said criteria and the other requisite requirements.  |  |
|           |   | c.) At least six (6) out of eight (8) water meters submitted for Efficiency Test using GSCWD Test Bench shall pass all testing at Transitional and Minimum flows.  |  |
|           |   | d.) The GSCWD test bench shall be the official measuring equipment to be used for Efficiency Test at Transitional and Minimum Flow. The said testing shall undergo once only, thus results are final.  |  |
| <b>J.</b> | <b>STRAINER SCREEN</b>                                    | Meter fitted with strainer on inlet to protect against dirt.   |  |
| <b>K.</b> | <b>METER SEAL</b>   | Steel cable or stainless-steel wire (plastic coated) with GSCWD marking or any kind of tamper proof meter seal design by the manufacturer. Lead meter seal is not acceptable.  |  |
| <b>L.</b> | <b>BIDDERS QUALIFICATION</b>                              | Bidder shall be an authorized dealer / reseller of the offered product for after sales and support.  |  |

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| <b>II. ADDITIONAL REQUIREMENTS</b> |                            |   |  |
| <b>A.</b>                          | <b>METER BODY MARKINGS</b> | Flow Direction Arrow  |  |
|                                    |                            | Meter Size: 15mm  |  |
|                                    |                            | Marked with laser print "GSCWD" inside the register dial printed in Bold and all written in Capital Letters.  |  |
|                                    |                            | Also, serial numbers shall be engraved or embossed on the side of the body and on the top of the upper body casing.   |  |
| <b>B.</b>                          | <b>SERIAL NUMBERING</b>    | Shall be provided by GSCWD which shall be unique or no duplication in every meter. Minimum of six (6) digits and shall be engraved or embossed in block type by the supplier. Shall be permanent and only one serial number will appear on the external top surface of the register box ring. |  |
|                                    |                            | <i>Note: Serial numbering begins with 126461-129460.</i>  |  |
| <b>C.</b>                          | <b>PAINTING</b>            | Automotive finished; Blue   |  |

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| D. | WARRANTY                   | All water meters shall be guaranteed against defects in workmanship and material contents. The winning bidder shall guarantee to replace defective water meters within three (3) year from the date of delivery. For verification purposes, GSCWD technician shall also be allowed to open a reported malfunctioning water meter, without effect on the three year warranty.  |  |
| E. | OTHER PACKAGE              | <p>With plastic end cap installed to both meter body thread ends.</p> <p>Each meter individually packed in a small box containing 2 threaded tailpieces and 2 rubber gasket that fitted to its outlet design of the manufacturer.</p> <p>Also, the winning bidder shall provide additional 1,200 pcs rubber gaskets and an additional 1,200 pcs tailpieces.</p> <p>It shall be packed by 10's per batch with the meter serial numbers indicated in four sides of the external portion of carton/box.</p> <p>The tailpieces shall be of the same material composition as the meter body.</p>   |  |
| F. | CERTIFICATION / COMPLIANCE | <p>A Certified True Copy, signed by the manufacturer, of the following certificates duly authenticated by the Consul shall be provided and presented by the winning bidder during Post-Qualification.</p> <ul style="list-style-type: none"> <li>a.) Certificate of Compliance for ISO 4064 or OIML R49</li> <li>b.) Certificate of Registration for ISO 14001 or WRAS (Water Regulations Approval Scheme)</li> <li>c.) MID (Measuring Instruments Directive) or EU Type Examination Certificate</li> </ul> <p>Also, a Certified True Copy of Patent Test Certificate from an independent body, authenticated by the Philippine Consulate shall be provided and presented by the bidder during Post-Qualification.</p> <p>Test Results or Certification from any Philippine government authorized material testing laboratory like DOST, MIRDC or any authorized government agency shall be submitted by the winning bidder to GSCWD in compliance with <b>Section D and E</b> in the <b>General Requirement</b>.</p> |  |
| G. | OTHER REQUIREMENTS         | <p>Schedule of Requirements:</p> <p>3,000 pcs 15mm Complete Sets – 90 Calendar Days upon receipt of Purchase Order. (One time delivery)</p> <p>One percent (1%) of the total quantity shall undergo random water meter test in Meter Testing Laboratory. The winning bidder shall pay the corresponding cost of testing.</p> <p>If twenty percent (20%) of the total number of water meters tested Failed the efficiency test, the procuring Entity (GSCWD) shall have the option to rescind or cancel the contract.</p>  |  |



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|  | Also, one (1) water meter shall undergo copper content testing in compliance with <b>Section D and E</b> in the <b>General Requirements</b> is require to the winning bidder.   |  |
|  | Random water meter testing shall be witnessed by five (5) GSCWD representatives. All costs such as transportation, hotel accommodation, meals, allowances and other related expenses shall be borne by the winning supplier. Testing shall be completed in two (2) days for each testing of water meters excluding travel period. |  |
|  | There shall be a representative from the winning bidder during random testing.  |  |
|  | The water meters shall be randomly tested for accuracy in a Water Meter Laboratory for Transitional and Minimum flow rates. These flow rates shall be the basis for the meter to PASS or FAIL in the Accuracy Test.   |  |
|  | After Delivery: All water meters delivered shall be subjected to accuracy test at GSCWD water meter laboratory. All cost related to the return of failed water meters and its replacement shall be borne by the supplier.   |  |
|  | Winning bidder must provide two (2) sets of special tools in dismantling the water meters.  |  |

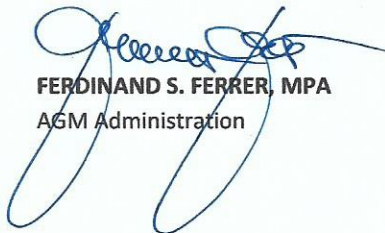
Prepared by:

**TECHNICAL WORKING GROUP FOR WATER METER**

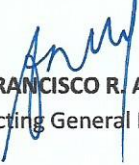
  
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