



## PURCHASE OF TWO THOUSAND (2,000) PIECES 15 MM DN VOLUMETRIC BRASS WATER METER

**Project Title:** Purchase of Two Thousand (2,000) pieces 15 mm DN volumetric brass water meter.

**ABC:** Php 5,600, 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		STATEMENT OF COMPLIANCE
<b>A. NOMINAL DIAMETER</b>	15 MM	
<b>B. METER TYPE</b>	Volumetric, Dry Dial	
<b>C. METROLOGICAL CLASS</b>	ISO 4064-1:2014, Class II	
<b>D. Meter Body</b>	Copper alloy containing not less than 57% copper.	
<b>E. METER DESIGN</b>	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.	
	For technology innovation purposes, the meter shall be AMR Ready and has inductive pulse output that can be equipped with a compatible pulse sensor.	
	Anti-magnetic type	
<b>F. DIMENSION</b>	Meter Register in Cubic Meters, minimum of four (4) digit registration.	
	Length without tailpieces = 115mm with ±5mm tolerance	
	Connectors = G 3/4 A, 2 pcs	
	Width of 85mm to 105mm	
	Height of 134mm with ±5mm tolerance	
<b>G. WORKING CONDITION</b>	Weight w/o tailpiece = 0.87 – 1.1 kg	
	Maximum working pressure: ≤16 bars	
<b>H. METROLOGICAL CHARACTERISTICS (MINIMUM PERFORMANCE)</b>	Maximum working temperature: 50°C.	
	Minimum Flowrate (Q <sub>1</sub> ) = 6.25 l/h; ±5 %	
	Transitional Flowrate (Q <sub>2</sub> ) = 10 l/h; ±2 %	
	Nominal Flowrate (Q <sub>3</sub> ) = 2.5 m <sup>3</sup> /h; ±2 %	
	Maximum Flowrate (Q <sub>4</sub> ) = 3.125 m <sup>3</sup> /h; ±2 %	
<b>I. EFFICIENCY TEST</b>	Q <sub>3</sub> /Q <sub>1</sub> = 400	
	a.) The bidders are required to submit five (5) water meters all with tailpiece per model/brand. Four (4) water meters will be tested for Efficiency Test using GSCWD Test Bench at Transitional and Minimum Flow. The fifth water meter shall be a cut-out model and expected to reveal the inner mechanism.	
	b.) The five (5) 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 three (3) out of four (4) 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.	
J.	<b>STRAINER SCREEN</b>	Meter fitted with strainer on inlet to protect against dirt	
K.	<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.	
L.	<b>BIDDERS QUALIFICATION</b>	Bidder shall be an authorized dealer / reseller of the offered product for after sales and support.	

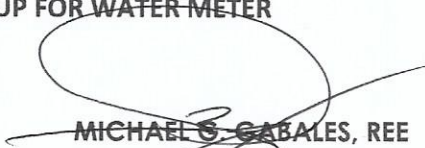
<b>II. ADDITIONAL REQUIREMENTS</b>			
A.	<b>METER BODY MARKINGS</b>	Flow Direction Arrow	
		Meter capacity shall be indicated in the top surface and in the meter body.	
		Marked with "GSCWD" at top plate printed in Bold and all written in Capital Letters.	
B.	<b>SERIAL NUMBERING</b>	Complies with manufacturer's serial numbering requirement. It shall be permanent and only one serial number in sequence will appear in the meter.	
C.	<b>PAINTING</b>	Automotive finished; Blue	
D.	<b>WARRANTY</b>	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 if necessary, without effect on the three-year warranty.	
E.	<b>OTHER PACKAGE</b>	With plastic end cap installed to both meter body thread ends.	
		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.	
		Also, the winning bidder shall provide additional 800 pcs rubber gaskets and an additional 800 pcs tailpieces.	
		Also, 400 pieces of non-return valve that fitted on the outlet design of water meter is required to maintain the meter registry irreversible and for maintenance purposes if necessary.	
		The tailpieces shall be of the same material composition as the meter body.	
F.	<b>CERTIFICATION / COMPLIANCE</b>	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. <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 Water Regulations Approval Scheme (WRAS)</li> <li>c.) Measuring Instruments Directive (MID) or EU Type Examination Certificate</li> </ul>	
		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> .	

J.	<b>TERMS OF DELIVERY</b>	Schedule of delivery:  1,500 pcs 15mm Volumetric Brass Water Complete Sets 60 Calendar Days upon receipt of Purchase Order. (One-time delivery)	
H.	<b>OTHER REQUIREMENTS</b>	<p>One percent (1%) of the total quantity required in each delivery of water meter 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> <p>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.</p> <p>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 one (1) day for each testing of water meters excluding travel period.</p> <p>There shall be a representative from the winning bidder during random testing.</p> <p>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.</p> <p>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.</p>	

Prepared by:

**TECHNICAL WORKING GROUP FOR WATER METER**

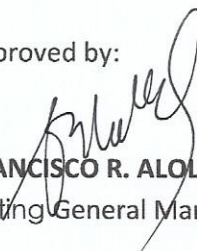
  
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