



TECHNICAL SPECIFICATION 15 MM Ø WATER METER

TITLE: SUPPLY AND DELIVERY OF SEVEN THOUSAND (7,000) PIECES OF 15 MM Ø MULTI-JET BRASS WATER METER.

SCOPE OF WORK:

THE SCOPE OF WORK SHALL BE THE SUPPLY AND DELIVERY OF WATER METERS TO GENERAL SANTOS CITY WATER DISTRICT.

I. GENERAL REQUIREMENTS

A. NOMINAL DIAMETER	15 MM
B. METER TYPE	Multijet
C. METROLOGICAL CLASS	"B"
D. METER DESIGN	Flow is bi-directional (<i>no non-returned valve at outlet portion</i>)
	Meter registry is irreversible
	Hermetically or vacuum sealed register
	Solid and Robust design, high impact glass lens & pressure resistance
	Anti-magnetic type
	Water meter body and register box ring shall be made of brass. Meter register in cubic meters (m ³)
E. DIMENSION	Length without tailpieces = 165mm with ±5mm tolerance
	Tailpiece length = 75 mm with ±5mm tolerance, 2 pcs
	Width of 85mm to 105mm
	Height of 90mm to 120mm (including cap in closed position)
F. WORKING CONDITION	Working Pressure: 10-17 Bars
	Water Temperature: The meter can work without deterioration on temperature at local climate
G. METROLOGICAL CHARACTERISTICS (MINIMUM PERFORMANCE)	Minimum Flow Rate (Q _{min}) = 0.03 m ³ /hr; Allowable error in accuracy is ±5 %
	Transitional Flow Rate (Q _t) = 0.12 m ³ /hr; Allowable error in accuracy is ±2 %
	Maximum Flow Rate (Q _{max}) = 3.0 m ³ /hr; Allowable error in accuracy is ±2 %
	Nominal Flow Rate (Q _n) = 1.5 m ³ /hr; Allowable error in accuracy is ±2 %
H. EFFICIENCY TEST	<p>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.</p> <p>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.</p>

	<p>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.</p> <p>b.) 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.</p> <p>c.) The GSCWD test bench shall be the official measuring equipment to be used for Efficiency Test hence, the results are final.</p>
I. STRAINER SCREEN	Meter fitted with strainer on inlet to protect against dirt
J. METER SEAL	Steel cable or stainless steel wire (plastic coated) with tamper proof meter seal with GSCWD marking. Lead meter seal is not acceptable.
K. BIDDERS QUALIFICATION	Bidder shall be an authorized dealer / reseller of the offered product for after sales and support.

II. ADDITIONAL REQUIREMENTS

A. METER BODY MARKINGS	Flow Direction Arrow
	Meter Size: 15mm
	Marked with "GSCWD" at top plate of register assembly and top brass printed in Bold and all written in Capital Letters
B. SERIAL NUMBERING	Shall be provided by GSCWD which shall be unique or no duplication in every meter. Minimum of five (5) digits and shall be engraved 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. Note: Serial numbering begins with 100601 onwards.
C. PAINTING	Automotive finished; Blue
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 one (1) year from the date of final testing. For verification purposes, GSCWD technician shall also be allowed to open a reported malfunctioning water meter, without effect on the one year warranty.
E. OTHER PACKAGE	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 must provide an additional 10% rubber gasket of the total delivered water meter.
	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.
	The tailpieces shall be of the same material composition as the meter body.
	<p>Schedule of Requirements:</p> <p>7,000 Complete Sets – 90 Calendar Days after issuance of Purchase Order. (One time delivery)</p> <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. One time testing of water meter is not allowed.</p>

F. REQUIREMENTS

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.

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 three (3) 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.

Supplier shall submit an ISO 4064 Certification.

Prepared by:

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