national regulator for compulsory specifications

Type Approval Certificate

SA 1674

In accordance with the provisions of chapter 5, section 22(1) and 22(2)(a) and (b) of the Legal Metrology Act (Act 9 of 2014), the Chief Executive Officer hereby certifies that the pattern of the instrument(s) described herein meets the requirements for approval purposes of the,

Legal Metrology Act and SANS1529-1

and may be used for prescribed purposes after due consideration of any limitations or conditions imposed by the pattern description.

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant Standard, it does not constitute or imply any guarantee as to the safety of the equipment.

Instrument:	"B Meters Model GSD8" in-line, mechanical, single-jet type water meter.
Applicant:	Absolute Energy Solutions (Pty)Ltd
Date of Issue:	04 July 2024
Date of Expiry:	03 July 2034
Approved by:	J Marneweck

Signed by:Jaco Marneweck
Signed at:2024-07-10 10:16:20 +02:00
Reason:I Approve Jaco Marneweck

Acting General Manager: Legal Metrology
National Regulator for Compulsory Specifications
Private Bag X25, Brooklyn, 0075
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1. INTRODUCTION

Name and Model: "B Meters Model GSD8" in-line, mechanical, single-jet type water meter

Manufacturer: B Meters

Legally Relevant Software: None

Interfaces: Pulse pickup

Optional Equipment: None

"B Meters Model GSD8" in-line, mechanical, single-jet type water meter. The technical data is given in Table 1.

Description	B Meters Model GSD8-RFM
Table 1	
Accuracy Class	B
Meter Temperature Class	T50
Nominal flow rate (Q_p)	2.5 m^3/h
Minimum flow rate (Q_{min})	0.05 m^3/h
Bore size	20 mm
Maximum operating pressure	1600 kPa
Volume of one revolution	0.0001 m^3
Verification scale interval of the meter	0.00005 m^3
Indicating range of the meter	99 999,999 m^3
Overall length of the meter	130 mm
Pressure loss group of the meter	P60
Installation orientation of the meter	H

2. CONSTRUCTION

2.1 General

"B Meters Model GSD8" is an in-line, class B, mechanical, single-jet type water meter with a brass body for potable water with temperature class, T50. The permanent flow rate (Q_p) of water meter is described in the above Table 1. The meter shall only be installed in the horizontal orientation.

2.2. Meter

The “B Meters Model GSD8”, single-jet type water meter body is manufactured from brass and “ELIX ABSP2H-AT”, plastic material. The body of the meter consists of two halves. The bottom brass casing houses the measuring chamber, strainer/single-jet hole of the impeller. The 5 digit, integral counter/register and reduction gear unit are housed in the upper plastic casing of the meter body. Measuring takes place by means of the impeller rotation speed**,** which depends on the velocity of the water flow through a single hole on the impeller cup.

The meter is equipped with a pulse pickup, which may be used for communications purposes,

2.3 Meter register assembly

The non-resettable register assembly indicates up to 99 999,999 m^3. Each drum is numbered from 0-9. The motion of the drums from one digit to the next is completed during the time that the drum of the immediately next lowest value completes the last tenth of its revolution.

3. OPERATION

3.1 General

Single-jet meters operate on the velocity principle, water flows from the inlet into the measuring chamber through the strainers/single-jet hole of the impeller cup and drives the impeller. The impeller rotation is magnetically transmitted to the register which register the volume delivered. The pulse pickup is installed in the cavity provided to the bottom of the register.

4. VERIFICATION MARK

4.1.1 Application of the verification mark

The verification mark shall be applied by passing sealing wire through the hole drilled in the inlet or outlet pipe of the meter, around the meter inlet or outlet pipe and apply the verification mark on the lead seal, (see Illustration 4).

4.1.2 Software

There is no software protective mark on this instrument.

5. CONDITIONS OF APPROVAL

5.1 The water meter shall be marked with the approval number SA1674.

5.2 The primary indication shall take precedence in the case of any discrepancies.

5.3 The decimal separator may be a comma or a dot on the line.

5.4 The units of measurement shall be m^3.

5.5 The meter shall only be installed in the horizontal orientation.

5.6 The meter is a complete sealed unit and components may not be accessed or replaced without obvious damage to the meter.

6. NOTES TO INSPECTORS, VERIFICATION OFFICERS AND REPAIRERS

6.1 Calibration/Adjustment

No calibration/adjustment is possible on the water meter. The meter shall be dismantled when found to be non-compliant.

6.2 Verification test requirements

The water meter shall be verified according to the relevant annex of SANS 1529-1.

7. ILLUSTRATIONS

Illustration 1
Photograph showing the water meter.

Illustration 2
Photograph showing the water meter register and dials.

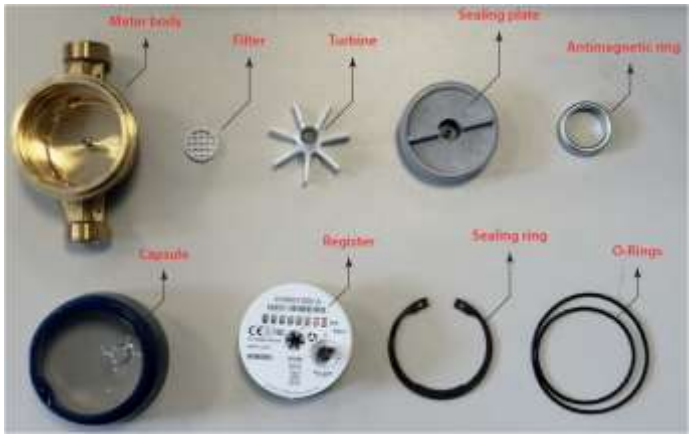

Illustration 3
Photograph showing water meter components.

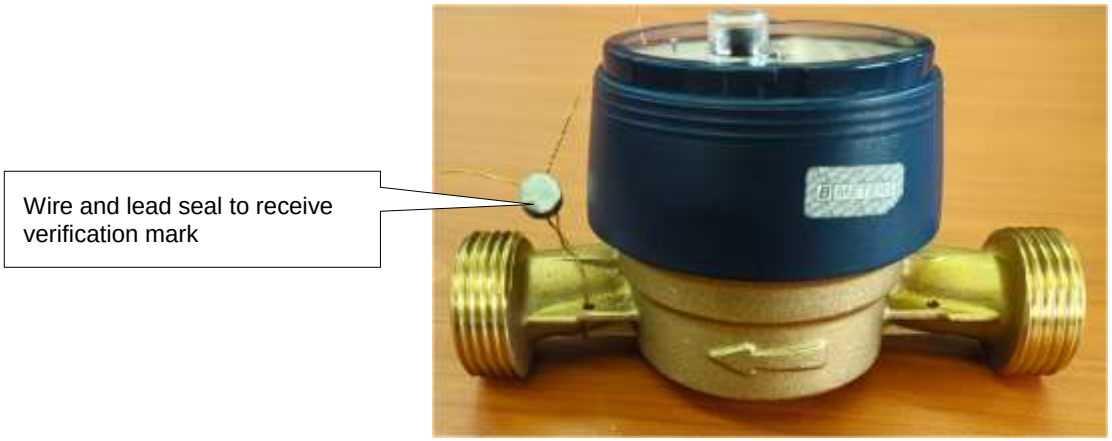

Illustration 4
Photograph showing the application of the verification mark.

8. REFERENCES

8.1 Project number: 039 / 05 / 24 (081 / 07 / 23)
8.2 OIML: None