

Type Approval Certificate



Type Approval Identification: SA 1508 – AA2

Issuing Authority: NRCS, Legal Metrology, Type Approval

Identification of Instrument: “ASM Model LXHS” in-line mechanical water meter

Applicant: Precision Meters (Pty) Ltd

In accordance with the provisions of section 18(2)(a) of the Trade Metrology Act (Act 77 of 1973), the Director of Trade Metrology hereby certifies that the pattern of the instrument(s) described herein meets the requirements for approval purposes of the,

Trade 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.

Approved by:
Director: Trade Metrology

A handwritten signature in black ink, appearing to read "M. M. M. M.", is centered within a light grey rectangular box.

Date of Issue 23 April 2014

1. INTRODUCTION

Name and Model: “ASM Model LXHS” in-line mechanical water meter
Manufacturer: Precision Meter (Pty) Ltd
Legally Relevant Software: None
Interfaces: The water meter is equipped with a pulse output.
Optional Equipment: None

“ASM Model LXHS” plastic bodied mechanical water meter. The technical data is described in Table 1.

Table 1		
ASM Model		LXHS
Material		“PA663515BK” plastic
Accuracy Class		C
Nominal flow rate (Q _n)		2,5 m ³ /h
Minimum flow rate (Q _{min})		0,025 m ³ /h
Bore size		20 mm
Maximum operating pressure		1600 kPa
Volume of one revolution of the piston		0,00006 m ³
First display element of the meter		0,0001 m ³
Verification scale interval of the meter		0,00002 m ³
Indicating range of the meter		9999,99998 m ³
Overall length of the meter		165 mm
Pressure loss group		P100

1. CONSTRUCTION

1.1. General

The meter is of an accuracy class C with a bore size of 20 mm the permanent flow rate is 2,5 m³/h. The meter is manufactured from “PA663515BK” plastic. The meter may be installed in a vertical position with the flow either up or down or in a horizontal position. The water meter is installed inside a plastic enclosure.

1.2 Mechanical

The body of the meter consists of two halves. The lower half, houses the measuring chamber, non-return valve, strainer and top plate. The 8 digit, integral counter and reduction gear unit is located in the upper half of the meter body.

The meter may be fitted with a non-return valve to prevent reverse flow.

1.3 Mechanical Register Assembly

The mechanical register assembly consist of 8 digits of which the smallest graduation is 0,00002 m³. The measuring unit is m³. The indication of the multiples of an m³ is registered on the white digits and the submultiples of an m³ are on red digits.

1.4 Electro mechanical

1.4.1 Indicating device

This meter do not have an electronic indicator.

1.4.3 Data Interface

The water meter is equipped with a pulse output.

3. OPERATION

The rotary motion of the piston is transmitted to the counter via the drive shaft, which is attached to a central spindle and a worm gear. The meter is fitted with a non-return valve to stop reverse flow.

4. PROTECTIVE AND VERIFICATION MARK

4.1 Application of the Protective Mark (Seals)

The protective mark shall be applied to the meter in the following manner:

Sealing wire is passed through a moulded lug on the upper body of the water meter and through a moulded lug in the lower body of the water meter and is secured by means of a lead seal (see Illustration 2).

4.2 Application of verification mark

The verification mark shall be applied to the meter in one of the following manners.

Sticker: If a sticker approved by the Director of Trade Metrology is to be used it shall be affixed to the surface surrounding the primary indicator lens in such a manner that the required markings are legible, or

Seal: If a dedicated seal is to be used it shall be affixed by passing sealing wire through a moulded lug on the upper body of the meter, and through a moulded lug in the lower body of the water meter and secured by a lead seal.

5. CONDITIONS OF APPROVAL

5.1 The instrument shall be marked with the approval number SA 1508.

5.2 The meter shall only be installed inside a covered enclosure preventing the meter from being exposed to direct sunlight during normal conditions of use.

6. NOTES TO INSPECTORS AND VERIFICATION OFFICERS

6.1 Adjustment

6.1.1 No adjustment can be made on the water meter. The meter will be dismantled when the meter is inaccurate.

6.2 Description of modification

6.2.1 The difference between this approval and the previous approvals under this approval number is the inclusion of the 20 mm “ASM Model LXHS” mechanical water meter with a plastic body which was brass previously.

6.3 Verification test requirements

6.3.1 The water meter shall be verified according to the relevant annex of SANS 1529-1 as a complete instrument.

7. ILLUSTRATIONS



Illustration 1
Photograph of the 20 mm “ASM Model LXHS” water meter



Illustration 2

Photograph showing the application of the protective mark on the 20 mm “ASM Model LXHS” water meter

8. REFERENCES

8.1 Project

Project number: 003/04/14

8.2 OIML

None