Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 14/3/26

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Itron Model TD8 DN25 Water Meter

submitted by Itron Australasia Pty Ltd
8 Resberg Road
Wingfield SA 5013

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 49-1 Water Meters Intended for the Metering of Cold Potable Water and Hot Water, *Part 1 Metrological and Technical Requirements*, dated May 2022.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 3 approved – interim certificate issued	10/07/14
1	Pattern & variants 1 to 3 amended (validity date) – interim certificate issued	17/10/14
2	Pattern & variants 1 to 3 amended (validity date) – interim certificate issued	29/01/15
3	Pattern & variants 1 to 3 approved – certificate issued	13/02/15
4	Pattern updated. Variants 4 & 5 approved – certificate issued	20/07/23

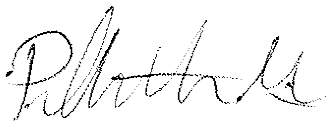
CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 14/3/26' and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.



Phillip Mitchell
Acting Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 14/3/26

1. Description of Pattern approved on 10/07/14

An Itron model TD8 DN25 class 2 meter used to measure cold potable water for domestic supply for trade.

1.1 Field of Operation

The field of operation of the measuring system using the DN25 Itron TD8 model water meter is determined by the following characteristics:

Minimum flow rate, Q_1:	0.0315 m^3/h
Transition flow rate, Q_2:	0.0504 m^3/h
Maximum continuous flow rate, Q_3:	6.3 m^3/h
Overload flow rate, Q_4:	7.875 m^3/h
Flow rate ratio, Q_3/Q_1:	200
Temperature class:	T30
Maximum admissible temperature:	50 °C
Maximum admissible pressure:	1600 kPa
Pressure loss class:	Δp 63
Accuracy class:	2
Flow profile sensitivity class:	U0/D0 (see 1.3.1)
Orientation:	All positions
Flow Direction:	Forward only

1.2 Features/Functions

The pattern (Figure 1) consists of a positive displacement flow sensor and a mechanical indicating device and has features/functions as listed below:

Connection type:	Threaded end connections as per AS 3565.1
Display:	A mechanical indicating device having a series of eight aligned digits allowing for a maximum indication range of 99999.999 m^3 in 0.001 m^3 increments
Communications:	None
Materials:	Flow sensor: Brass
	Flow converter: Plastic
Meter length:	178 mm
Non-return device(s):	The meter may be fitted with dual check valves

1.3 Conditions

1.3.1 Installation Conditions

No flow straightener or flow conditioner is required.

The flow profile sensitivity class is U0/D0.

1.3.2 Water Quality

The meter is approved for use in the metering of potable water supplies.

1.4 Verification Provision

Provision is made for the application of a verification mark.

1.5 Sealing Provision

Instruments shall include one or more devices which can be sealed so as to prevent dismantling or modification of the instrument without damaging the device(s). The device(s) may incorporate the verification mark.

1.6 Descriptive Markings and Notices

Instruments are marked with the following data, either grouped or distributed on the casing, the indicating device dial or an identification plate (Figure 2):

Manufacturer's name or mark	...
Serial number	...
Pattern approval number	NMI 14/3/26
Numerical value of maximum continuous flow rate, Q_3	...
Flow rate ratio, Q_3/Q_1	...
Unit of measurement	m^3
Temperature class (1)	T30
Maximum admissible pressure (2)	1600 kPa
Pressure loss class (3)	63 kPa or Δp 63
Orientation (4)	…
Flow profile sensitive class (5)	U0/D0
Direction of flow	→ or similar
Accuracy class (6)	2

(1) Optional for temperature class T30 meters

(2) Optional for meters with MAP = 1400 kPa

(3) Optional for pressure loss class Δp 63

(4) Optional for meters approved for all orientations

(5) Optional for U0/D0 class meters and accuracy class 2.5 meters

(6) Optional for accuracy class 2 meters

2. Description of Variant 1 **approved on 10/07/14**

The meter may be fitted with flanged (round or oval) end connections.

3. Description of Variant 2 **approved on 10/07/14**

The meter is approved with the following Q_3/Q_1 ratios: 250 and 315.

4. Description of Variant 3 **approved on 10/07/14**

The meter may have a length of 190 mm.

5. Description of Variant 4 approved on 20/07/23

The pattern is approved for use with with DN32 sized flanged end connection adaptors (Figure 3). The meter length with the DN32 sized flanged end connection adaptors is 190 mm.

6. Description of Variant 5 approved on 20/07/23

The pattern and variants are approved for use with a single check valve.

TEST PROCEDURE No 14/3/26

Water meters tested for verification shall comply with the Certificate of Approval, Technical Schedule, and the maximum permissible errors for initial and subsequent verifications at the operating conditions in effect at the time of verification. Maximum permissible errors for the initial and subsequent verification of water meters are given in the *National Trade Measurement Regulations 2009* (Cth).

Water meters shall be verified in accordance with NITP 14 *National Instrument Test Procedures for Utility Meters*.

The following exceptions apply for accuracy class 2 meters:

- The working water temperature range for verification is dependent on the temperature class of the meter as follows:

  T30, T50: 20 °C ± 10 °C;

  T70 to T180: 20 °C ± 10 °C and 50 °C ± 10 °C;

  T30/70 to T30/180: 50 °C ± 10 °C.

- Where a meter is tested with a working water temperature greater than 30 °C, the maximum permissible errors shall be:

  ±5% within the flowrate range $Q_1 \leq Q < Q_2$; and

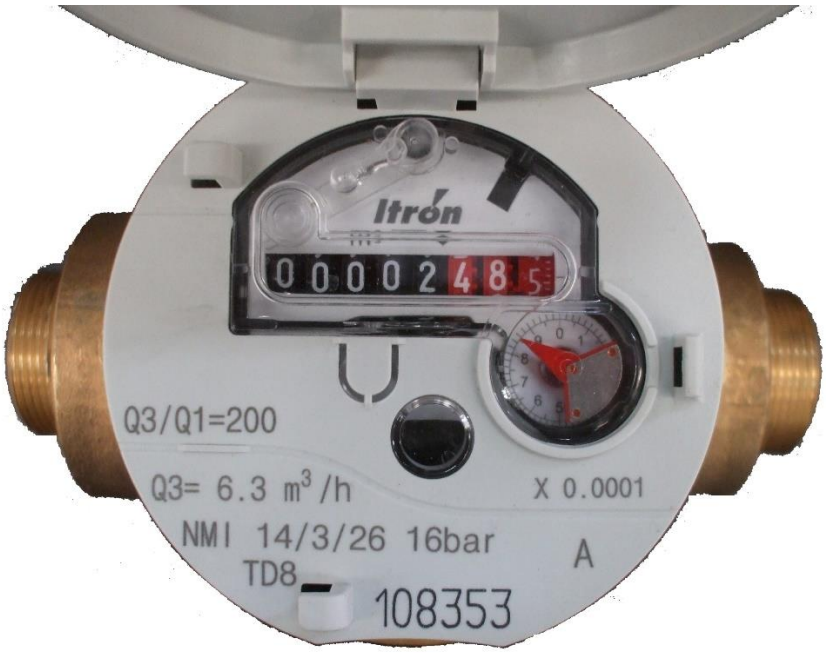
  ±3% within the flowrate range $Q_2 \leq Q \leq Q_4$.

NOTE: NMI reserves the right to vary this procedure. Any such variation shall be notified in writing by NMI.

FIGURE 14/3/26 – 1

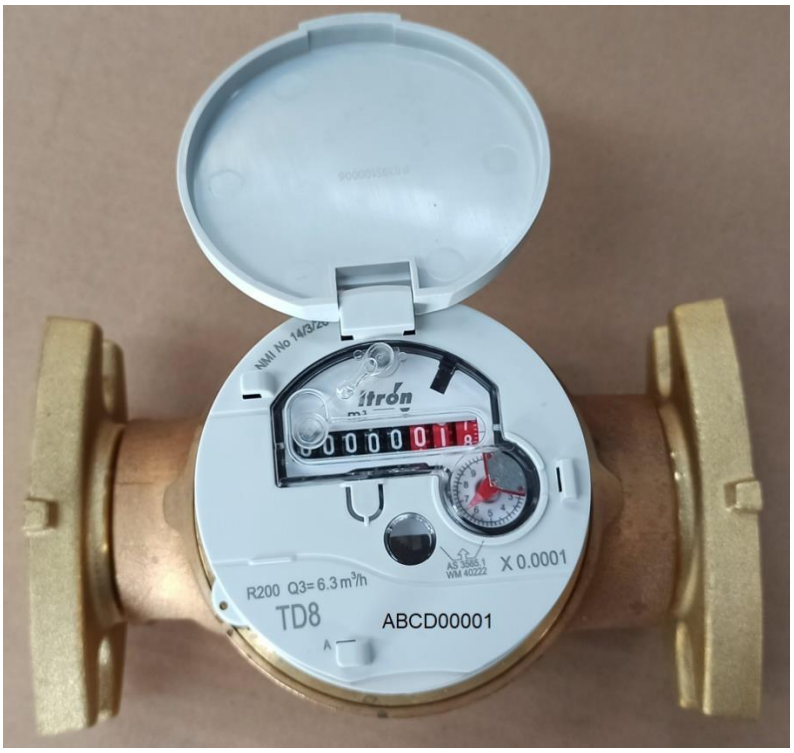
Itron TD8 DN25 water meter (the pattern)

FIGURE 14/3/65 – 2



Indicating device and example of required markings

FIGURE 14/3/26 – 3



Meter fitted with DN32 sized flanged end connection adaptors

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