

V100 (PSM-T)

Volumetric Cold Potable Water Meters

Product Specification

Overload flow rate (Q ₄)	kL/h	5	5	7.875	12.5	20
Size - Nominal diameter (DN)	mm	15	20	25	32	40

The V100 (PSM-T) meter is designed for the measurement of cold potable water and offers accuracy, long maintenance free life and is highly resistant to tampering.

The range includes five different meter sizes to suit overload flow rates from 5 kL/h up to 20 kL/h. The V100 (PSM-T) is suitable for water temperatures up to 50°C and a maximum working pressure of 1600 kPa. Standard counter registration is in kL and litres.

Every V100 (PSM-T) water meter is individually tested for accuracy before despatch.

Compliance with NMI R49-1 and Australian Standards

All meters in the V100 (PSM-T) range meet the Metrological and Technical requirements of NMI R 49-1: **Water Meters Intended for the Metering of Cold Potable Water and Hot Water** and are StandardsMark certified to AS 3565.1 by SAI Global under Licence No: SMKP20052.

Pattern Approval for the 15 and 20mm meters has been granted by the National Measurement Institute (NMI) under Certificate of Approval No: 14/3/1. For the 25, 32 and 40mm meters this is covered under Certificate of Approval No's: 14/3/11, 14/3/12 and 14/3/18 respectively.

Design Features

- Positive displacement volumetric rotary piston principle of measurement ensures registration even at the very lowest rates of flow with maintained accuracy over the flow range.
- Can be installed in horizontal, vertical or inclined pipelines without affecting accuracy.
- Requires no calibration throughout its lifespan.
- "O" ring seal placed between the measuring chamber and the meter body ensures that internal leaks which could by-pass the measuring chamber are eliminated.
- Use of advanced engineered plastics for the measuring chamber minimises wear and maintains reliability under all operating conditions.
- A large surface area fine filter fitted on the measuring chamber inlet prevents damage by gathering solid particles. Due to its design, a partially obstructed filter will not affect the meter's accurate registration.

Counter

The counter is fully sealed, vacuum filled, with an easy to read straight reading presentation.



The number rollers are totally immersed in a non-toxic liquid. A sac attached to the counter casing acts as a balancing membrane and ensures the pressure of the liquid in the counter is the same as that of the water inside the meter. The counter is placed in a window inside the meter body in the direction of flow for easy reading.

Tamper Resistant

The V100 (PSM-T) offers outstanding resistance to illegal tampering. Its unique conical body half design means it cannot be disassembled while in service and the mechanically driven counter is resistant to magnetic interference. An integral non-return valve is fitted as standard to all V100 (PSM-T) meters or a dual check valve assembly option is also available for the 20 and 25mm sizes. This stops the meter being run back illegally. A lead seal will reveal any attempt that is made to dismantle the meter. An individual serial number is engraved on each meter.

Remote / Electronic Reading

The standard V100 (PSM-T) provides the water industry with the flexibility to meet future demands. Today a conventional meter - tomorrow, whilst in use and without any disconnection, risk of component damage, need to re-calibrate and with no affect on meter performance or accuracy, it can be easily converted for electronic / remote readout capability by simply removing a plastic plug and fitting a magnetically operated "T probe".



Optional Features

- Meters can be supplied with the T probe fitted.
- Meters can be supplied with various standard connections (e.g. nut and tail, ball joint, flanged, etc.).
- The 20mm and 25mm V100 (PSM-T) meters can be supplied fitted with two independently acting non-return valves in series at the downstream end of the meter in compliance with AS/NZS 2845.1.

Materials

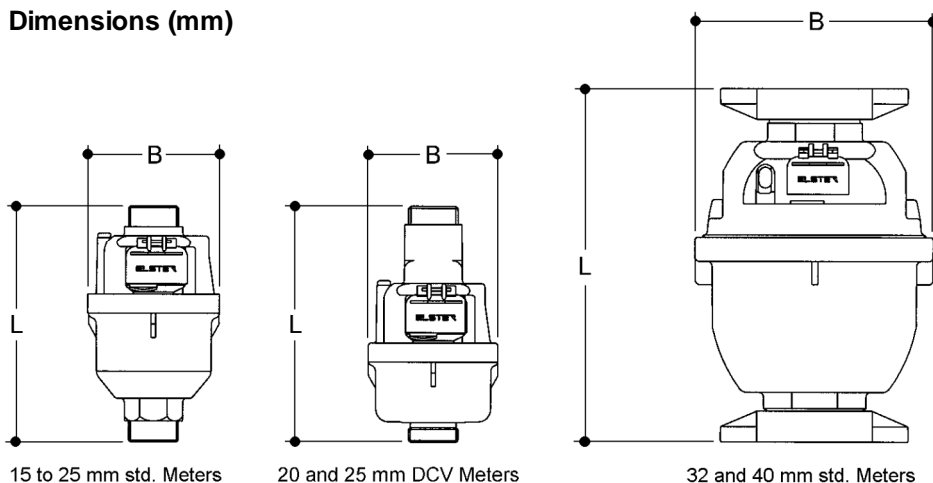
All V100 (PSM-T) meters are manufactured from the highest quality materials ensuring maximum resistance to wear and corrosion. Copper alloys in contact with potable water are de-zincification resistant and comply with the Australian Standard AS 2345. All other materials in contact with potable water comply with the Australian Standard AS/NZS 4020.

V100 (PSM-T) Performance to NMI R49-1 / Class 2

Nominal diameter (DN mm) - (Q ₃ /Q ₁ Ratio)		15 - (200)	20 - (200)	25 - (315)	32 - (250)	40 - (200)
Minimum flow rate - (Q ₁) ± 5%	L/h	20	20	20	40	80
Transitional flow rate - (Q ₂) ± 2%	L/h	32	32	32	64	128
Permanent flow rate - (Q ₃) ± 2%	kL/h	4	4	6.3	10	16
Overload flow rate - (Q ₄) ± 2%	kL/h	5	5	7.875	12.5	20
Minimum registration flow rate	L/h	3	3	13	22	37
Pressure loss – Std. / DCV Meter	kPa	24.9	24.5 / 69	23 / 65	17	23
@ flow rate	kL/h	2.5	2.5	3.5	5	7.5
Maximum working pressure	kPa	1400	1400	1400	1400	1400
Working temperature range	°C	0.3 to 30	0.3 to 30	0.3 to 30	0.3 to 30	0.3 to 30
Operating temperature range	°C	0.3 to 50	0.3 to 50	0.3 to 50	0.3 to 50	0.3 to 50
Minimum counter registration	L	0.1 ❶	0.1 ❶	0.1	0.1	0.1
Maximum counter registration	kL	99999.999 ❶	99999.999 ❶	99999.999	99999.999	99999.999
Pulse Output	Litre/pulse	5 ❶	5 ❶	5	5	5
Overall meter length (L ± 1 mm) ❷	mm	133	153	177	189	231
Maximum meter diameter (B)	mm	87	87	101	121	160
Bare meter weight ❸	kg	1.1	1.25	2.1	3.6	5.7

- Notes:**
- ❶ Technical data shown is for meters fitted with 5 x 3 number wheel counters. For meters fitted with 4 x 4 number wheel counters, the data for minimum and maximum registration plus pulse output would be 0.01, 9999.9999 and 0.5 respectively.
 - ❷ Overall lengths other than those shown are also available.
 - ❸ All weights shown including 20 and 25mm DCV meters are unpacked without connections and are approximate only.

Dimensions (mm)



The Company's policy is one of continuous improvement and the right is reserved to modify the specifications without notice.

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