

V100 PSM  
Volumetric Water  
Meter Range

Tested, Tried and Trusted



The V100 Elster Kent Volumetric Water Meter is the world's favourite domestic water meter with over 50 million already in service in over 100 countries and offer accuracy, long life, low maintenance and tamperproof operation.



Available in sizes from 15mm to 25mm, with flow rates of between 5.7 l/h to 7 m<sup>3</sup>/h, V100 meters offer unrivalled performance to SANS 1529-1: 2006, ISO 4064 class C (for 15mm to 25mm only). In addition, models can provide valuable management information via a probe pulse unit upgrade.

- The world's biggest-selling domestic water meter
- Optimum accuracy and performance at all times, in any position
- Revolutionary grooved piston for improved durability and performance
- Durable tamperproof construction
- Full range of sizes from 15mm to 25mm
- Water temperatures up to 50°C
- Maximum working pressure of 16 bar
- Standard pulse output providing access to management information (reed switch optional extra)

### Unrivalled accuracy in any position, for any flow

Due to the volumetric rotary piston measurement principle, the V100 range can achieve the highest levels of reading accuracy even at the lowest flow rate. The meter can be installed in any position ie: horizontally, vertically or inclined pipelines, maintaining optimum performance with no loss of accuracy.

### Robust, leak-proof construction

The use of advanced engineering plastics for the meter's measuring chamber significantly reduces wear and helps maintain reliable, accurate measurement over all operating conditions. Solid particles are gathered by a large surface area strainer, further preventing damage, and its advanced design ensures that partial obstruction of the strainer will have no ill effect on the accuracy of the meter's registration. A body 'O' ring seal between the measuring chamber and meter body ensures that internal leaks which could by-pass the measuring chamber are eliminated.

### Easy to read

The all-in-one counter and gear unit is fully sealed, liquid filled using a vacuum and offers simple, straight-reading presentation. The number rollers are completely immersed in a lubricating non-toxic liquid, and a sac attached to the counter casing acts as a balancing membrane, ensuring the pressure of the liquid in the counter equals that of the external water. The counter window is inside the meter body in the direction of flow for simplified reading.

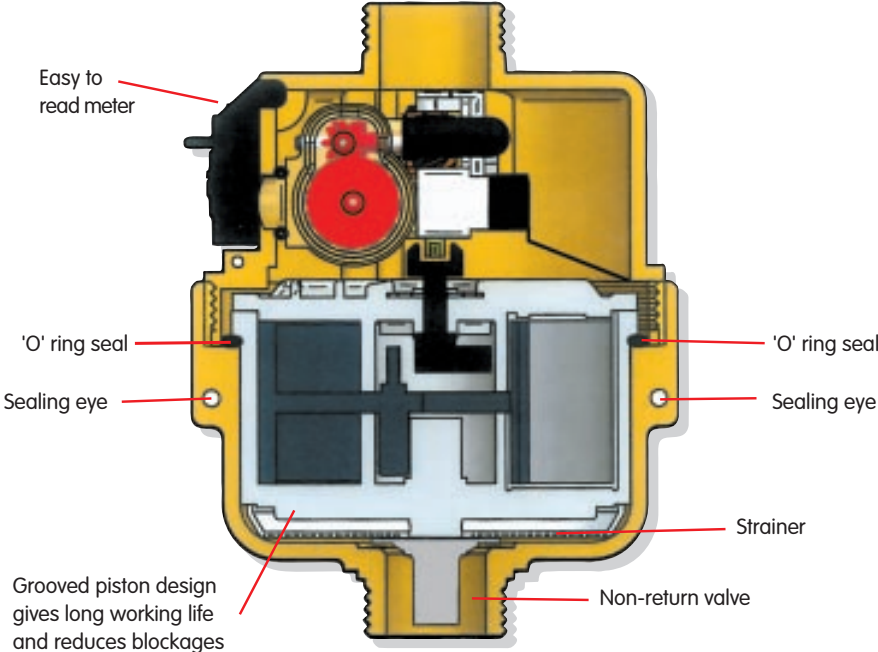
### Tamperproof operation

The V100 offers unrivalled resistance to illegal tampering: its unique conical body-half design eliminates the risk of disassembly whilst in service and the mechanically driven cyclometer-type counter is resistant to magnetic interference. Non-return valve provides further protection against outside interference, preventing the meter being operated in the reverse direction to reduce the reading. This restrictor cannot be removed without opening the meter and destroying the seal.

### Reliability guaranteed

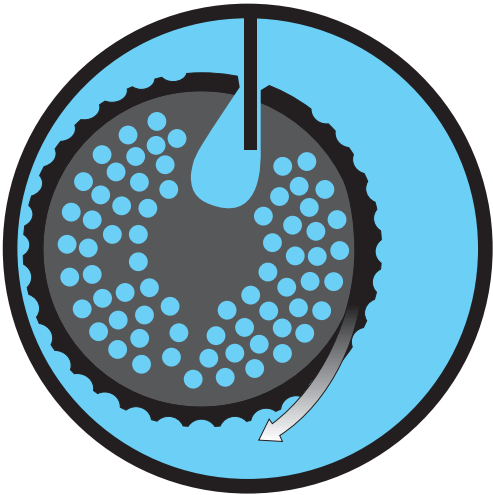
Every V100 meter is individually tested over its flow range before despatch, and is manufactured from the highest quality materials ensuring maximum resistance to wear and corrosion.

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- The V100
- Volumetric
- Water Meter
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Revolutionary Grooved Piston



Meter stoppages are substantially reduced, durability enhanced and performance improved as a result of a uniquely-designed grooved piston within the meter measuring chamber, increasing applications flexibility.  
 (Available in 15mm and 20mm sizes)

**Relative motion of the grooved piston**

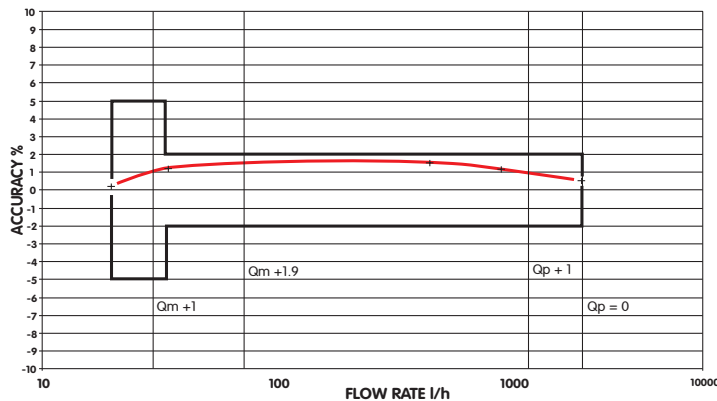
Its action, with the stationary chamber wall, creates small flow eddies which hold solids in suspension until flushed out, reducing meter stoppages.

# V100 Specifications Class C to SANS 1529-1: 2006



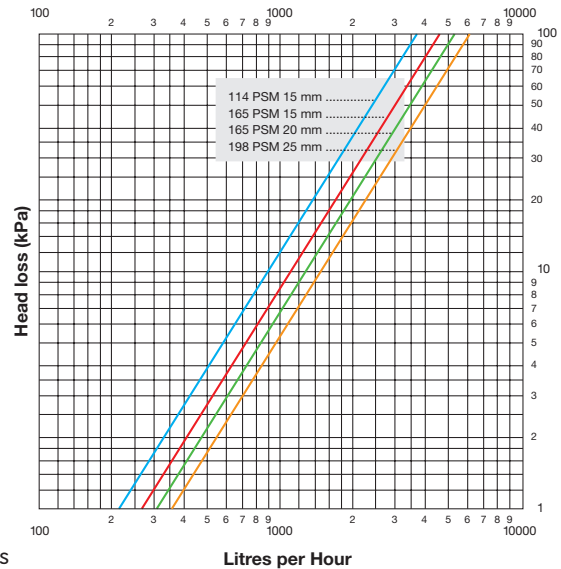
Meter size (mm)			15	20	25
Overload flow rate	qs±2%	m³/h	3.0	5.0	7.0
Permanent flow rate	qp±2%	m³/h	1.5	2.5	3.5
Transitional flow rate	qt±2%	l/h	22.5	37.5	52.5
Minimum flow rate	qmin±5%	l/h	15.0	25.0	35.0
Starting flow (approximate)		l/h	5.7	9.5	13.2
Output pulse		litre/pulse	0.5	0.5	5.0
Meter diameter		mm	86	86	104
Meter length		mm	114 or 165	165	198
Length over connectors		mm	194 or 245	259	311
Weight - Meter only (approximate)		kg	0.80	1.30	2.90

## Typical Flow Graph



Pressure drop curves (Typical)  
15, 20 & 25mm PSM water meters

## Pressure Drop Graph



### Typical Specification:

15mm V100 PSM DZR brass bodied water meter of the semi-positive rotary piston type, 114mm long with non-return valve, fitted with a straight-reading counter and fixed one pulse per 1/2 litre output facility registering

in m³ and approved under the Trade Metrology Act and Regulations and to SANS 1529-1: 2006 Class C specifications.

### Warranty

All goods are tested and inspected prior to despatch. In the event of defects resulting from faulty workmanship or materials, such goods will be replaced/repared at our discretion, free of charge at the factory, but no responsibility will be accepted for any direct or consequential damage. This warranty covers the malfunction of a correctly installed item due to

a manufacturing fault, but does not cover wear and tear considered normal at the locality of installation. Brass meter warranty 5 years from date of manufacture. Plastic meter warranty 3 years from date of manufacture.

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