

V100 / PSM-T

Volumetric cold water meters

The world's favourite domestic water meter



Kent

V100 Volumetric cold water meters

- **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 40mm**
- **Water temperatures up to 50°C**
- **Maximum working pressure of 16 bar**
- **Pulse output available providing access to management information**



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

Available in sizes from 15mm to 40mm, with flow rates of between 7.5 l/h to 20 m³/h, V100 meters offer unrivalled performance to BS5728, ISO 4064 class C or D (for 15mm to 25mm only).

In addition, models can provide valuable management information via a probe pulse unit upgrade.

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: 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.

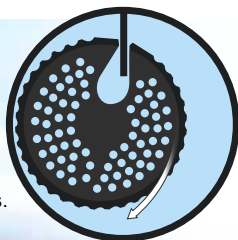
An optional returnreverse flow restrictor provides further protection against outside interference, preventing the meter being operated in the reverse direction to reduce the reading. This restrictor cannot be removed without opening the meter and destroying the seal.

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.



Reliability guaranteed

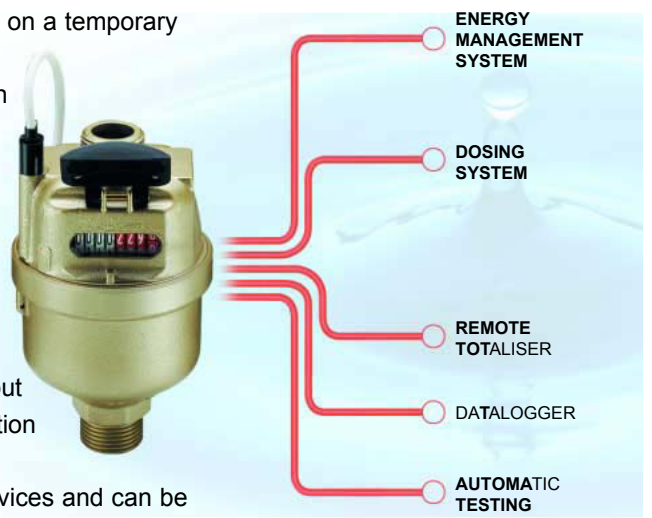
Every V100 meter is individually tested over its flow range before despatch, and is manufactured from the highest quality materials ensuring maximum resistance to wear and corrosion. All ABB meters are UK WRc approved to prevent health risk.

Vital management information tool

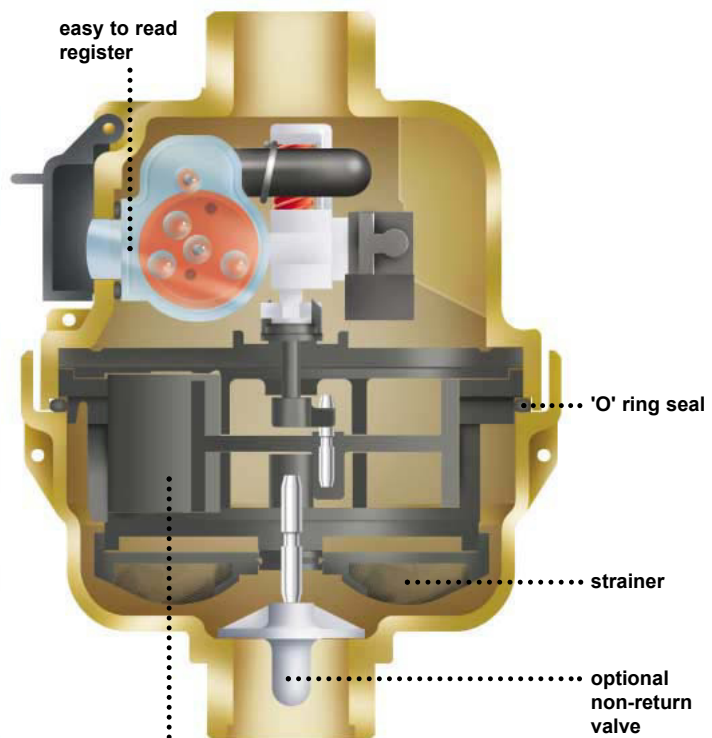
Valuable management information can be obtained with the aid of a probe pulse unit, available on V100 meters.

The unit provides important consumption and flow information on a temporary or permanent basis, allowing examination and analysis of consumption patterns and providing a valuable early detection of leaks.

Volt-free probe pulsers provide output signals for interrogation by externally-powered reading devices and can be attached to previously installed V100 meters with the facility to install a probe pulse unit, at any time without interrupting the water supply.



V100 meter



Grooved piston design gives long working life and reduces blockages

Measuring Instruments Directive 2004/22/EC

Specifications according to OIML R49, EN14154 or ISO4064

R250 flow range (Q_3/Q_1)

Exceeding class D equivalent

Meter size (mm)			15	20
Meter thread size	in		G3/4"A	G1"A
Overload flow rate	$Q_4 \pm 2\%$	m^3/h	3.125	5
Permanent flow rate	$Q_3 \pm 2\%$	m^3/h	2.5	4
Transitional flow rate	$Q_2 \pm 2\%$	l/h	16	25.6
Minimum flow rate	$Q_1 \pm 5\%$	l/h	10	16
Starting Flow (approximate)		l/h	2	2
Maximum registration		m^3	9999.99999	9999.99999
Output pulse		litre/pulse	0.5	0.5

All models Headloss at Q_3 less than 0.63 bar.
Maximum water temperature 30°C. Maximum working pressure 16 bar.

R160 flow range (Q_3/Q_1)

Class C equivalent

Meter size (mm)			15	20	25	30	40
Meter thread size	in		G3/4"A	G1"A	G1 1/4"A	G1 1/2"A	G2"A
Overload flow rate	$Q_4 \pm 2\%$	m^3/h	3.125	5	7.875	12.5	20
Permanent flow rate	$Q_3 \pm 2\%$	m^3/h	2.5	4	6.3	10	16
Transitional flow rate	$Q_2 \pm 2\%$	l/h	25	40	63	100	160
Minimum flow rate	$Q_1 \pm 5\%$	l/h	15.625	25	39.375	62.5	100
Starting Flow (approximate)		l/h	2	2	6	12	20
Maximum registration		m^3	9999.99999	9999.99999	99999.99999	99999.99999	99999.99999
Output pulse		litre/pulse	0.5	0.5	5	5	5

All models Headloss at Q_3 less than 0.63 bar.
Maximum water temperature 30°C. Maximum working pressure 16 bar.

Physical properties

Meter size (mm)			15	20	25	30	40
Meter diameter	mm		86	86	104	120	158
Meter radius (width from pipe centre)	mm		43	43	52	60	79
Meter length preferred	mm		165	190	-	-	300
Meter length alternative	mm		115 or 134	165	199	199	-
Length over connectors	mm		200 or 228	267	311	327	421
Weight - Meter only (approximate)	kg		0.80 or 0.90	1.30	1.30	2.20	3.70

Accuracy Curve shown overleaf: