

# V110 Volumetric cold water meters

## Product Specification

### SPECIFICATIONS

Permanent flow rate Q3 m <sup>3</sup> /h	2.5, 4.0, 6.3
Size mm	15, 20, 25

### Compliance with standards

Performance figures for the V110 range meet the requirements of the following:

- EC Directive 2004/22/EC (MID)
- OIML R49
- EN 14154
- ISO 4064

### Register

The register is fully-sealed, vacuum filled, with a simple straight-reading presentation. The number rollers are totally immersed in a non-toxic liquid which acts as a lubricant. The sac attached to the register casing acts as a balancing membrane and ensures the pressure of the liquid in the register is the same as that of the water inside the meter. The register is placed in a window inside the meter body in the direction of flow for easy reading.

### Tamperproof

The V110 offers outstanding resistance to illegal tampering. Its unique conical body-half design means it cannot be disassembled while in service and the mechanical-driven register cannot be interfered with magnetically. An individual serial number is heat printed on each body.

### Optional features

An internal disc-type reverse flow restrictor can be included as an optional feature. This reduces the possibility of water being run back illegally.

### Remote-reading

The V110 operates as a standard meter until the need arises and then by simply removing a plastic plug and inserting a magnetically-operated signal sensor, it can be converted for remote read. It can be converted on location whilst still in use without any disconnection, risk of component damage or need to re-calibrate. The pulse provided by the probe can be used to step a remote register or in the longer term, the output can also be interfaced with a module which could be interrogated by a computer or other device. The V110 model is particularly suitable for incorporation in energy management systems.



### KEY FEATURES AND BENEFITS

- Volumetric rotary-piston principle of measurement ensures registration even at the very lowest rates of flow with maintained accuracy over the flow range.
- Unique grooved piston design (15mm to 20mm).
- Can be installed in horizontal, vertical or inclined pipelines without affecting accuracy.
- The co-polymer resin manufactured body allows its use with absolute confidence where waters with aggressive or dezincification properties exist.
- Requires no calibrations throughout its lifespan.
- 'O' ring seal placed between the measuring chamber and 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.
- Large surface area fine filter prevents damage by gathering particles. Due to its design, a partially obstructed filter will not affect the meter's accurate registration.

## FLOW PERFORMANCE

According to EC Directive 2004/22/EC, OIML R49, EN14154 and ISO4064  
Flow range  $Q_3/Q_1$ : R160\* (Class C equivalent)

SIZE OF METER		MM	15	20	25
Meter thread size		inches	G $\frac{3}{4}$ B	G1B	G1 $\frac{1}{4}$ B
Overload flow rate	$Q_4 \pm 2\%$	m <sup>3</sup> /h	3.125	5	7.875
Permanent flow rate	$Q_3 \pm 2\%$	m <sup>3</sup> /h	2.5	4	6.3
Transitional flow rate	$Q_2 \pm 2\%$	l/h	25	40	63
Minimum flow rate	$Q_1 \pm 5\%$	l/h	15.63	25	39.38
Starting Flow (approximately)		l/h	5.7	9.5	13.2
Meter resets to zero at		m <sup>3</sup>	10000	10000	100000
Minimum indicated digit value		litre	0.1	0.1	n/a
Output pulse		litre/pulse	5	5	n/a

Headloss at  $Q_3$  less than 0.63 bar.

Maximum water temperature 30°C, working pressure 10 bar  
(16 bar on 15mm size).

**\*Note: Other  $Q_3/Q_1$  ratios are available on request.**

## DIMENSIONS

Meter length - A	mm	115	134	165	199
Meter diameter - B	mm	99	99	99	114
Length over connectors - C	mm	200	228	267	312
Normal pipe size	mm	15	15	20	25
Weight of meter and connections	kg	0.43	0.45	0.47	0.75

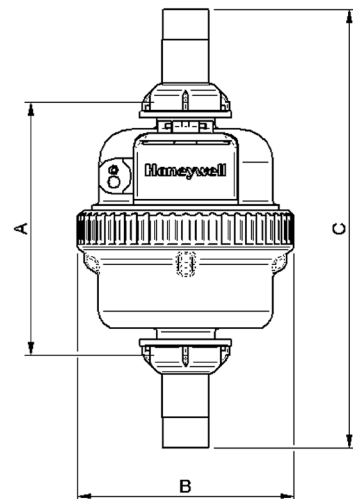
## INSTALLATION

Care should be taken during installation to ensure that the meter and its connectors are not subjected to elongation, compression or bending forces. Allowance should be made for the expected expansion and contraction of adjacent pipework. High installation stresses may eventually give rise to joint leakage or even permanent damage to the meter or its connections.

## MATERIALS

All Elster meters are manufactured from the highest quality materials ensuring maximum resistance to wear and corrosion and are UK WRc approved.

Pressure equipment directive 97/23/EC.



## For more information

[www.elstermetering.com](http://www.elstermetering.com)

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