

## Hybrid Class C Woltmann WP Meters.

### Legal Requirements

Water meters used in this application with nominal bore sizes 40mm, 50mm 80mm and 100mm must comply with the requirements of S.A.N.S 1529-1: 2019 and the N.R.C.S. and section 22 of the Legal Metrology Act 2014 (Act 9 of 2014).

Sizes 150mm, 200mm, 250mm, 300mm to comply with the requirements of ISO 4064.

Meters sizes 40mm, 50mm, 80mm and 100mm must be verified within the borders of South Africa in accordance with the requirements of section 7 of the Legal Metrology Act 2014 (Act 9 of 2014) All verification to be performed by registered Verification Officers in an S.A.N.A.S Accredited Verification Laboratory in terms of S.A.N.S. 10378 : 2012

### Meter to be suitable for the following applications: -

- Accurate measurement of cold potable water consumption.
- Suitable alternative to a combination meter in some applications.
- Suitable for large consumer applications.
- Accurate measuring and recording of minimum night flow.
- Monitoring and leak indication.

### Performance Specification

The Water Meter must be of the Hybrid Woltmann WP helical vane inferential velocity type with the following capabilities: -

<b>METER SIZE (mm)</b>	<b>50</b>	<b>80</b>	<b>100</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
Max. Flowrate qs ± 2% (m <sup>3</sup> /h)	30	80	120	300	500	800	1200
Permanent Flowrate qp ± 2% (m <sup>3</sup> /h)	15	40	60	150	250	400	600
Transitional Flowrate qt ± 2% (m <sup>3</sup> /h)	0.255	0.6	0.9	2.25	3.75	6	9
Minimum Flowrate q min ± 5% (m <sup>3</sup> /h)	0.09	0.24	0.36	0.9	1.5	2.4	3.6
Starting Flow (m <sup>3</sup> /h)							
Maximum Working Pressure (kPa)	1600	1600	1600	1600	1600	1600	1600
Body Length (mm)	200	200	250	300	350	450	500

In addition, the meters offered must comply with the following: -

- Epoxy coated cast iron body.

- Meter to have 1 moving part. No gears or shafts which create drag and can be damaged by suspended solids in the water.
- Impellor to have an inductive pick up to transferring pulses to the electronics in the counter.
- Clear IP68 LCD display showing total volume in M<sup>3</sup> and must be Gauss 1500 protected.
- Counter to indicate rate of flow.
- Meter must have the following features to facilitate convenience of on-site replacement:
  - (a) Pre-calibrated replaceable mechanism.
  - (b) In Meter sizes 40mm to 200mm, the Helical vane to be fitted in a shrouded cartridge designed to direct the entire volume of water through the measuring element ensuring body impact is negligible on the accuracy
- Meter to have working temperature  $\leq 60^{\circ}\text{C}$  (Ambient Maximum  $70^{\circ}\text{C}$ ).
- Meter to have a working pressure of 1 600 kPa.
- Meter to have a built-in flow straightener.
- Meter to have multiple communication options including Pulse, 4-20 mA, RS485 and Modbus.
- Meter must not be affected by magnetic interference. (Tampering).
- Lithium battery must be replaceable on site and have a  $\pm 8$  year working life under normal working conditions.
- Internal data logging. Data Scroll through facility on counter.
- The meter to have intelligent management functions: -
  - 1) Anti-magnetic symbol.
  - 2) Leak indicator (Days).
  - 3) Forward/reverse flow direction indicator.
  - 4) Battery level indicator.
  - 5) Instantaneous Flow Rate Value.
  - 6) Accumulated Flow Rate Value.
  - 7) Overload Flow rate Chart.
  - 8) Accumulated Flow Rate Chart.
- Each Meter must be backed with a 1-year warranty against faulty workmanship and/or materials.

### **General**

Spare parts for all Water Meters offered must be available in South Africa and still be available for a period of ten years after the purchase of the water meter.

### **MC 4 (8.20)**