



Main supporting organisation :



RAND WATER

20 & 21 August 2013

DBSA Vulindlela Auditorium, Midrand, South Africa

22 & 23 August 2013

Rotunda Hall, Bay Hotel, Camps Bay, Cape Town, South Africa

Main supporting organisation :



CITY OF CAPE TOWN - (ISIIZO SAKHAPA) - (ISIBO KAPPOO)
THIS CITY WORKS FOR YOU

New Technology in Domestic and Commercial Smart Water Meters

Presented by: **Keith Bailey**, Director: Sales & Marketing
Elster Kent Metering, South Africa

3rd REGIONAL AFRICAN

WATER

LEAKAGE SUMMIT 2013

Supported by the
International Water Association



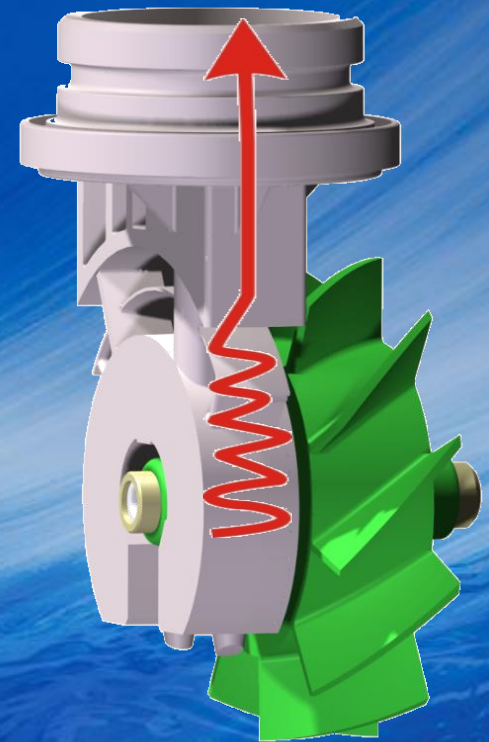
International
Water Association

Hybrid Smart Water Meters



Technology

- Hybrid water meters consist of one mechanical moving part as the flow / volume sensor, combined with electronic signal transmission and counters

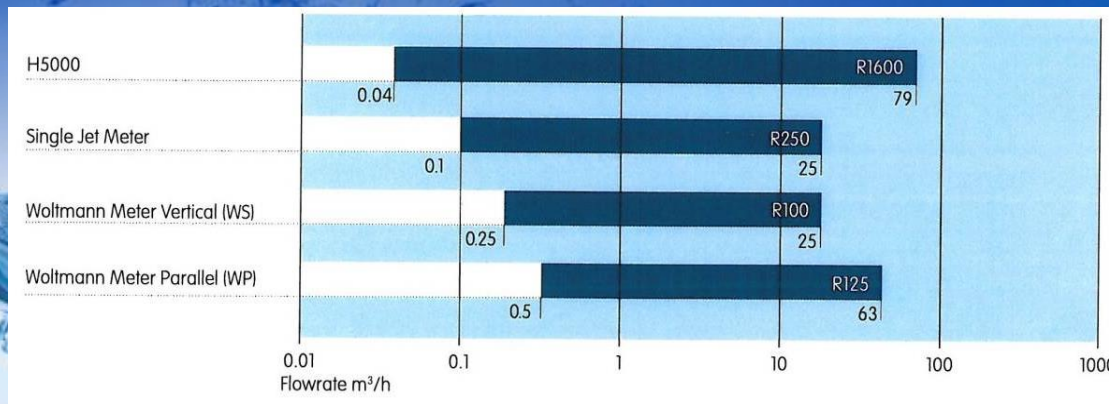


Benefits

- 🔥 Measuring capability and range exceeds that of full electronic water meters

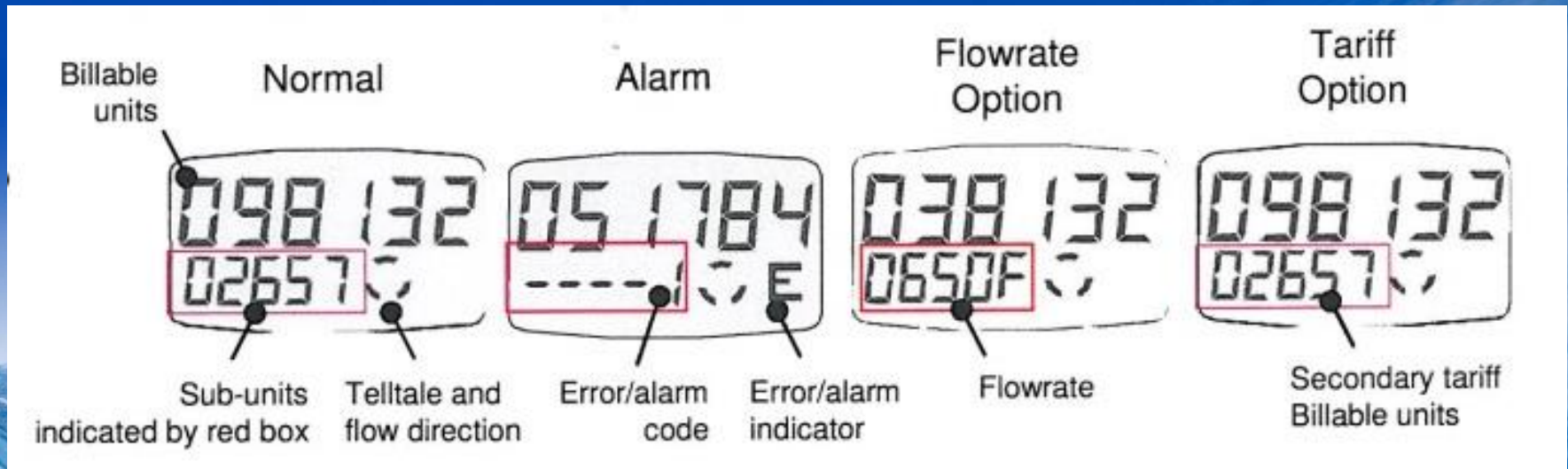


Comparison at measuring ranges (DN5)



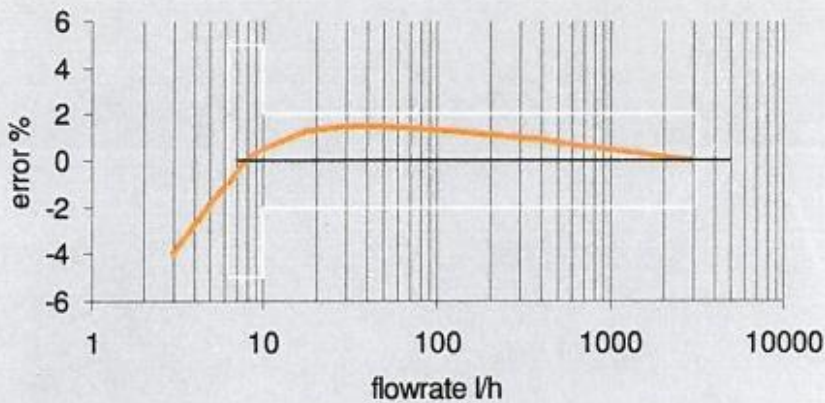
Technology

- Counters have full intelligence (logging, alarms, flow rate) and built in output options

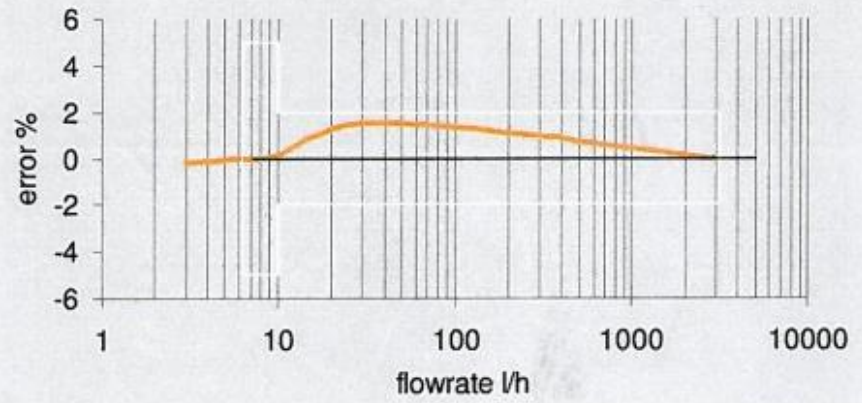


Technology

- 🔥 Excellent repeatability of the mechanical measuring sensor allow electronic modifying of the accuracy graph to maximise revenue generation within the legal limits



Typical accuracy with no curve shaping



Typical accuracy with curve shaping towards zero error below Q_2 .

Benefits

- Hybrid meters have a cost of approx 50% vs full electronic meters

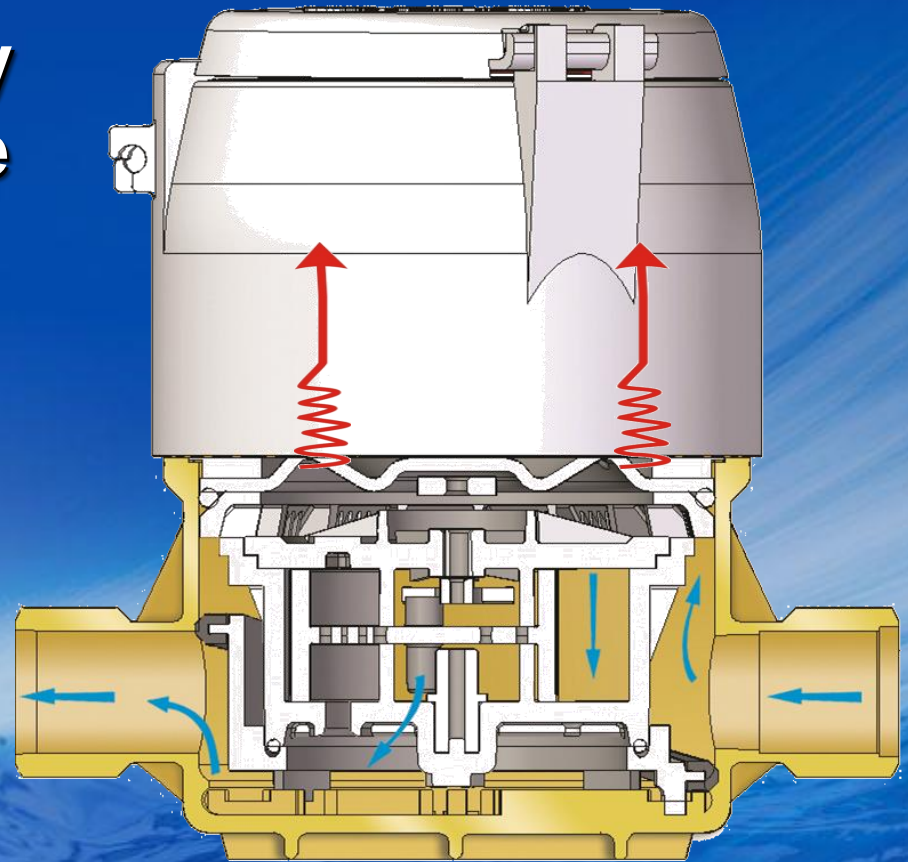


Domestic Hybrid Smart Water Meters



Operation

- 🔥 **Mechanical piston / impellor in water way transmit an inductive signal to the electronic intelligent counter**



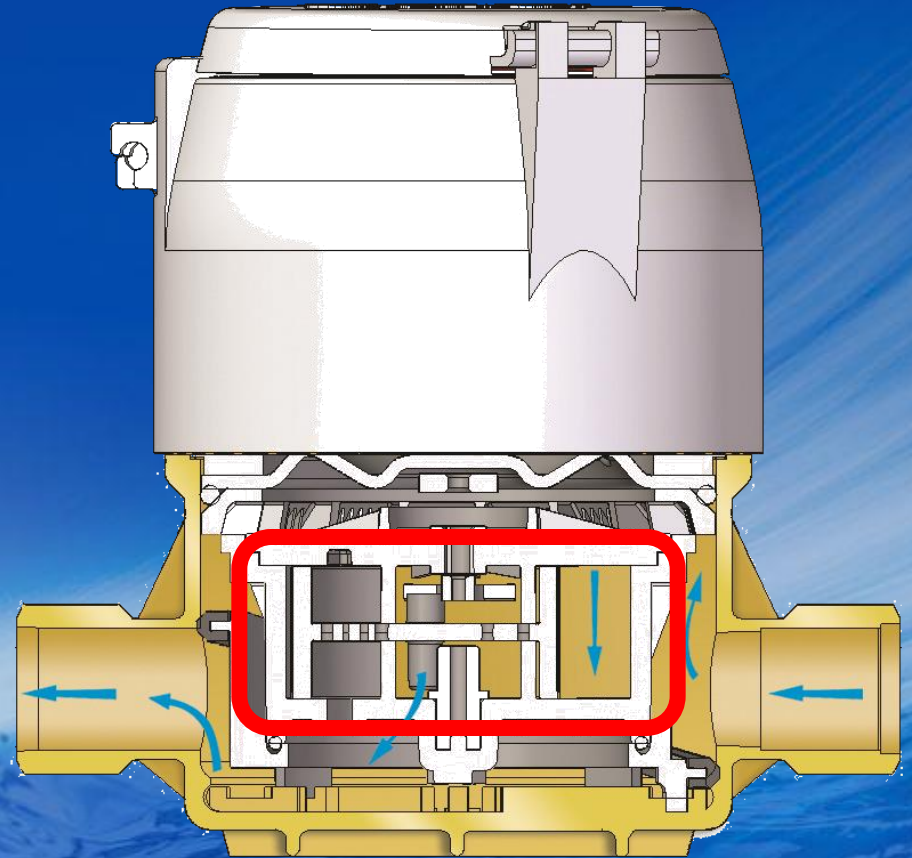
Operation

- 🔥 The counter displays volume (m³) and instantaneous flow rate, time of use volume and alarms



Technology

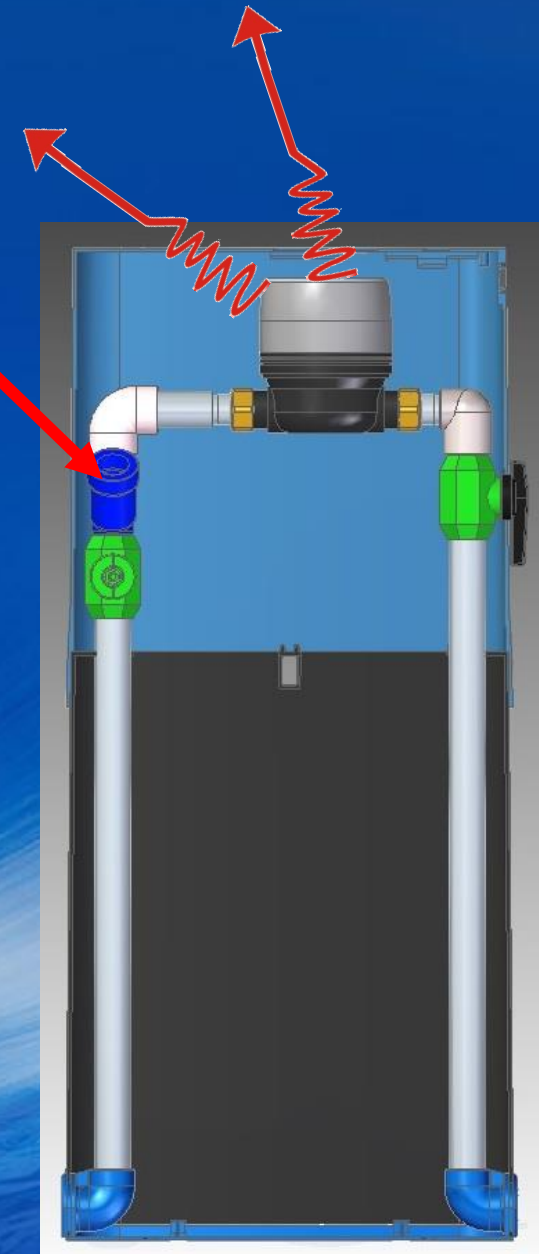
- 🔥 **Wear and tear and susceptibility to suspended solids dramatically reduced**



Ideal Installation

- 🔥 Above ground meter box with “y” strainer (with large area stainless steel sieve) on inlet side of meter
- 🔥 Above ground installation dramatically increases range of AMR

strainer



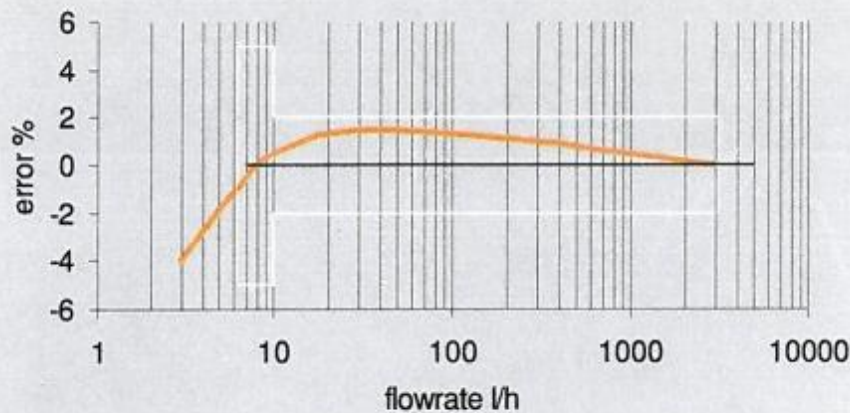
Features

- 🔥 Built in AMR allows display of a multitude of logging options including alarms and time of use volumes and tariff options

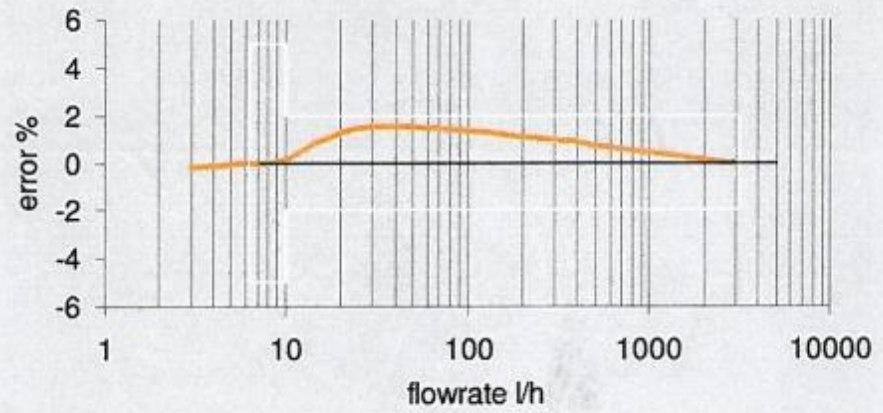


Features

- 🔥 Maximised revenue generation via less water escaping measurement



Typical accuracy with no curve shaping



Typical accuracy with curve shaping towards zero error below Q_2 .

Commercial / Bulk Hybrid Smart Water Meters



Operation

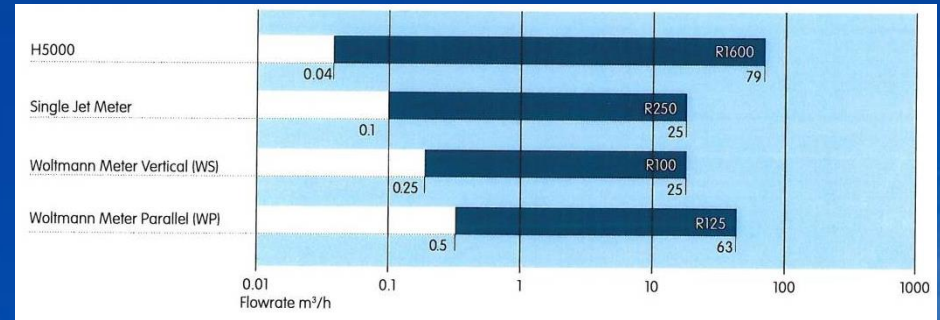
- 🔥 An impellor in the water way with jewelled bearings and tungsten stub shafts and thrust pads sends an inductive signal to an electronic intelligent counter. The counter displays volume (m^3) instantaneous flow rate and alarms



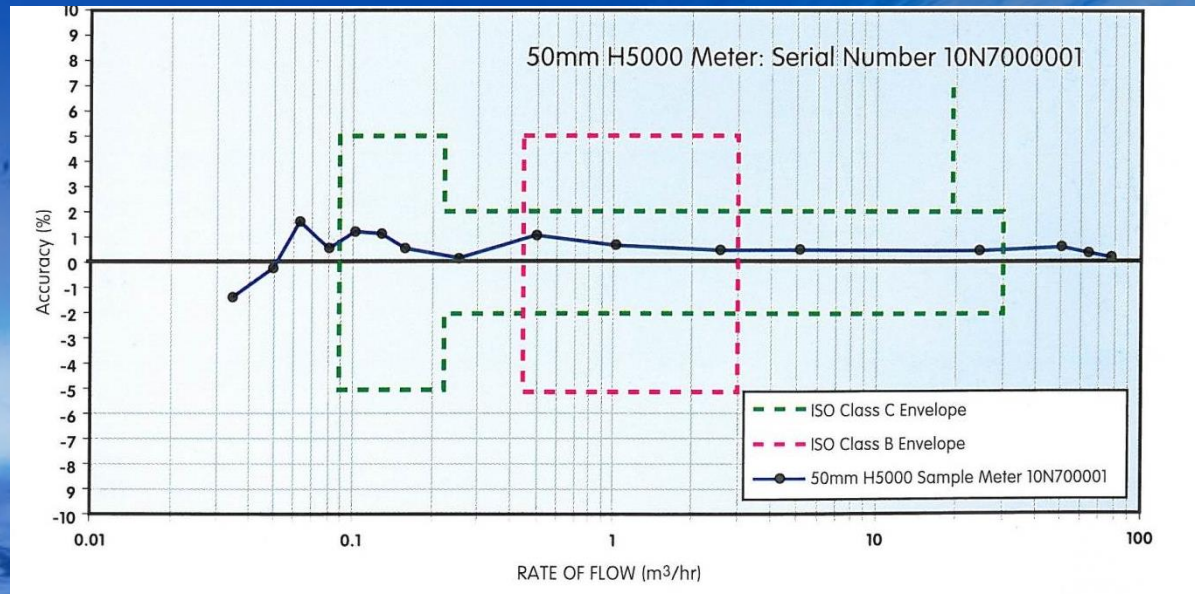
Features

🔥 **Measuring range exceeds that of all single element water meters**

Comparison at measuring ranges (DN5)

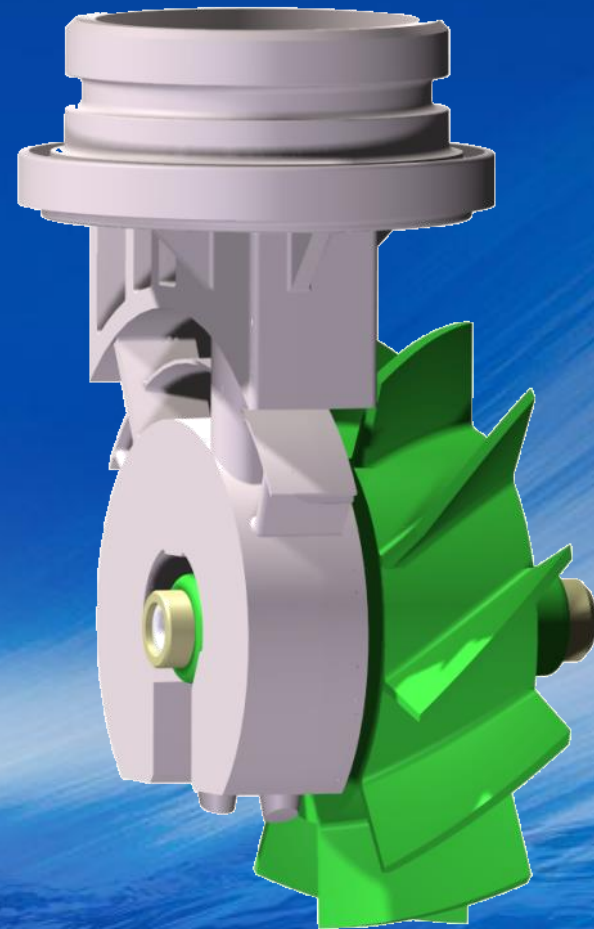


Compared versus ISO Class B & C accuracy envelopes



Features

- 🔥 **Wear and tear and susceptibility to suspended solids dramatically reduced**



Features

- 🔥 Built in signal outputs for AMR eliminate the need for signal pick-ups



Features

- 🔥 The outputs allow for a variety of logging options (bi-directional) and alarms. The counter displays (m³) instantaneous flow rate, flow direction and alarms



Conclusion

- 🔥 At this point hybrid smart water meters offer the best cost / benefit ratio compared with other types of water meters



- Thank You -

