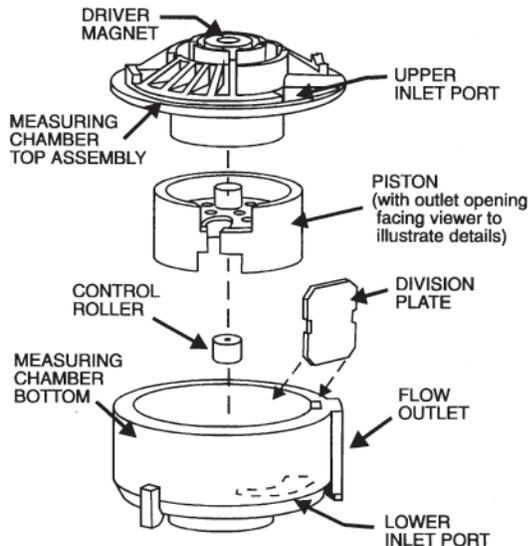


Features and benefits of Sensus Positive Displacement Water Meters

BACKGROUND

With more than 125 years' experience in the design and production of flow measurement equipment, Sensus and its predecessor companies have continuously provided water utilities with dependable, high quality products designed to meet their present and future needs — and backed them with outstanding customer service. Sensus positive displacement (PD) oscillating piston-type meters provide the most advanced technology available for cold water flow measurement in residential, light commercial and similar service applications. These top quality meters include a variety of outstanding features and offer water utilities a number of valuable benefits.



No other meter brand in this class offers such a full range of exclusive features and advantages. Before purchasing any brand of residential meter, consider these 12 reasons why Sensus PD meters are a superior value;

1. PROVEN LONG-LIFE SERVICE

Long-life service means greater payback over the life of each meter. Sensus makes piston type positive displacement meters for residential service because of their proven ability to provide excellent measurement accuracy and long-term performance. The piston measuring chamber is so accurate it is used in industrial applications for metering precious fluids.

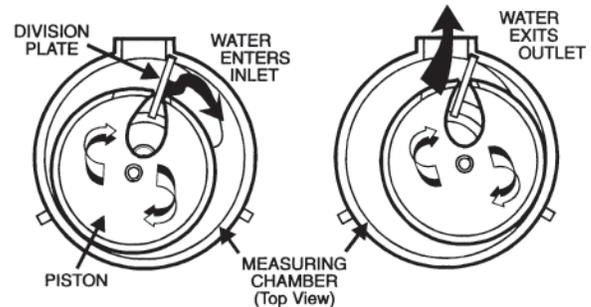
Introduced in 1985, SR II meters have dependably delivered accurate measurement and readings in millions of installations. In actual continuous service tests, they have remained within + or - 1-1/2% of full accuracy after measuring over 4 million gallons — more than 2 times the amount used in 20 years for a typical U.S. residential installation!

2. UNIQUE PISTON CHAMBER

accuSTREAM/ SR II meters have a specially designed piston chamber which combines the benefits of minimal internal parts wear and exacting part-to-part tolerances to produce highly accurate measurement and more. While some manufacturers claim their meters have extreme low flow sensitivity, the Sensus piston chamber design provides both outstanding sensitivity and extended life while measuring across the full range of flows required for each meter size.

Water enters the piston chamber through directional inlets to drive the oscillating piston, then exits through an outlet port.

Sensus' proven experience in designing and building high quality piston-type meters includes the original Sealed Register (SR) meter introduced in 1957 — the first volume produced magnetic drive design which successfully eliminated change gears, problem-prone direct drive shafts and packing glands between the measuring chamber and register.



3. DUAL PORTING HELPS REDUCE PARTS WEAR

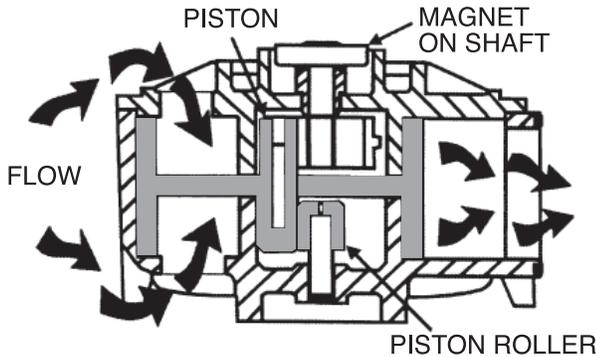
The measuring chamber's dual port design simultaneously directs an equalized water flow to the top and bottom surfaces of the piston. Water enters the chamber's upper and lower inlets to balance or "float" the piston, minimizing its weight and contact with the chamber's inside surfaces.

This results in minimum friction and wear at the top and bottom junctures to extend measurement accuracy for a longer period of time and reduce maintenance requirements.

4. LESS SURFACE FRICTION = LONGER LASTING SERVICE

The oscillating motion of the piston is controlled by its hub rolling against a freely rotating control roller bearing mounted on a stainless steel shaft, and the inside of the piston's skirt, moving against the outside diameter of the measuring chamber hub. This minimizes sliding friction and resulting parts wear. The design provides a small amount of clearance between the piston's outside diameter and the chamber's inside diameter allowing small dirt particles to pass through

without damaging wear surfaces or clogging the chamber. At the same time, the precise manufacturing processes used to produce PD meters enables Sensus to maintain tight tolerances at points where leakage could occur to ensure accuracy.



As a comparison, some other brands of piston meters control motion by allowing the piston's outside diameter to rub against the inside chamber wall, resulting in greater friction and a reduction in the piston's sensitivity. This also tends to trap dirt particles which create friction, wear and clogging. As an attempt to provide relief for dirt entrapment, some meter manufacturers add vertical grooves in the piston's outside surface. The grooves, however, may themselves create problems as they reduce the amount of wear surface, resulting in accuracy loss over time.

5. FINEST QUALITY MATERIALS

Sensus uses only top grade materials and modern manufacturing processes to ensure the best product quality. All materials are tested at Sensus' own laboratories to ensure consistency in quality and full adherence to engineering specifications.

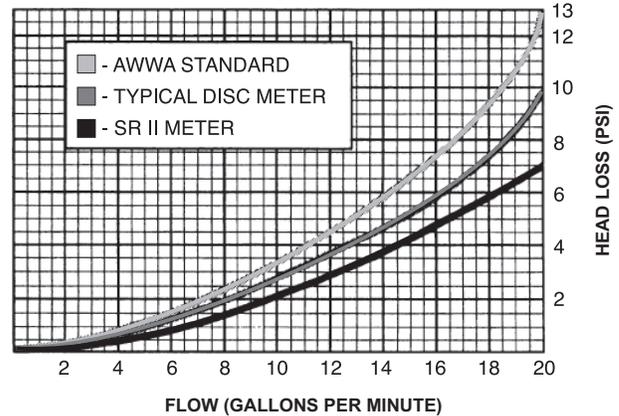
While other manufacturers may be content to offer products made with "off the shelf" materials, Sensus invests in the development of specialized materials and systems that provide greater service, quality and value.

For example, the piston and chamber materials in Sensus meters are made of a proprietary blend of synthetic resins, specially formulated to reduce friction and resist wear. Sensus/Rockwell pioneered the use of synthetic resin chambers in the 1960s and continues to refine and enhance the blend to meet today's exacting quality standards.

6. LOW HEAD LOSS MEANS LOW PUMPING COSTS

Since its introduction, the SR II meter's streamlined flow pattern has provided one of the lowest head (pressure) loss profiles of any same size positive displacement meter meeting industry standards. In addition to meeting or exceeding all American Water Works Association standards

for new meter accuracy, test results show the Sensus 5/8" PD meter's headloss is significantly lower than AWWA published headloss standards — even lower than that of typical disc meters.



For the water utility, lower head loss translates to savings from reduced pumping costs while maintaining prescribed line pressure in the distribution system.

7. UNIQUE TAMPER RESISTANT FEATURES

The original SR meter design incorporates a register which is locked into the meter by an internal fastener. Utility customers can not remove the register to obtain free water without first disassembling the meter. Utilities favor this tamper-proof feature.

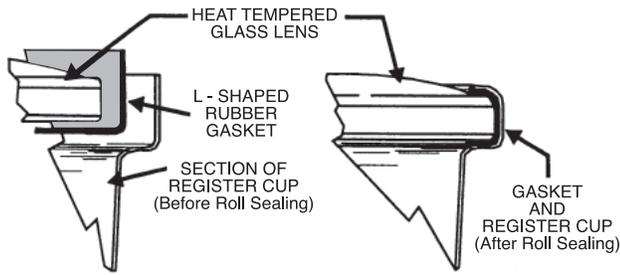
When the accuSTREAM/SR II meter was designed, it was recognized that a significant number of meters would be upgraded during their lifetimes from standard reading to encoder registers to take advantage of new advanced reading systems. This upgrade must be easily accomplished by the utility with minimum inconvenience to customers.

The accuSTREAM/SR II upgrade is facilitated by an externally secured register. However, this advantage could easily become a disadvantage if customers could also remove registers. Sensus engineers solved this problem by using a tamper resistant register bonnet.

Other accuSTREAM/SR II tamper resistant features include a heat tempered glass register lens that withstands accidental as well as deliberate abuse.

8. FIRST IN HERMETICALLY SEALED REGISTERS

No other meter manufacturer has more experience with designing and building hermetically sealed registers that are impervious to dust, dirt and moisture — even in the harsh, wet conditions of below ground meter pit environments. In fact, Sensus predecessor, Rockwell, invented the "L" shaped rubber gasket sealing method for meter registers.



The gasket is used in combination with a stainless steel register cup which is roll formed to hold the gasket in compression around three surfaces; the top, bottom and outside edges of a heat tempered unbreakable glass lens (for the standard read version register). The result is a permanently, hermetically sealed register which completely prevents moisture and dirt intrusion. Each Sensus register is tested under water at the factory to ensure integrity.

Sensus Electronic Communications Register (ECR) encoders use a similar sealing design in combination with a molded polycarbonate cover in place of the glass lens.

Because polycarbonate is porous to water molecules, Sensus patented the use of a formed inner liner for the cover, providing a highly effective impenetrable barrier to water molecules.

The success of this waterproofing system has been proven by millions of dependable ECR encoder registers mounted in outdoor meter boxes since 1988.

9. A VARIETY OF ENCODER REGISTER CHOICES

Sensus encoder registers are used with all Sensus automatic meter reading systems, enabling the water utility to mix-and-match, upgrade or migrate from one system to another without the expense of unnecessary meter change-outs. In addition, the Sensus encoder's variable length protocol is compatible with most other AMR systems on the market. Sensus has always maintained an open architecture philosophy to allow freedom of choice.

Only Sensus allows the flexibility of choosing from three encoder register reading resolutions with eight wheel variations to match meter size and application. These registers are available for use with inside meter sets or pit-sets. Versions such as the ECR-WP and TR/PL also include factory-sealed cable connections to ensure optimum performance in wet conditions such as those found in outdoor meter installations.

Plus absolute register identification integrity — Critical to the utilization of an automated meter reading system is the method of register identification. Other manufacturers provide encoder registers which must be programmed or "initialized" with individual identification numbers. Sensus believes that only a factory set permanent identification number can

provide a reliable, non-corruptible and impossible to duplicate meter reading reference. This saves money by eliminating reading and billing errors and reducing installation time.

10. TESTING AND QUALITY ASSURANCE PROGRAMS

Sensus PD meters are manufactured to rigid design specifications to ensure consistent high product quality. Standards are so exact that pistons and measuring chambers of same size accuSTREAM/SR II meters manufactured years apart can be exchanged with no resulting difference in measurement accuracy. The meters and their components undergo a variety of tests throughout the manufacturing process. Sensus maintains an extensive range of testing facilities and laboratories at its Uniontown, Pennsylvania facility.

Testing and Quality Assurance processes encompass a number of on-site facilities; Materials Laboratory, Chemistry Laboratory, Metallurgy Laboratory, high accuracy calibration and endurance test stands and other measurement equipment.



Scientific evaluation is also done using equipment such as Sensus' electron-beam microscope, capable of 3,000x magnification; a Weatherometer, able to simulate any environment from desert to rain forest, and other specialized instruments.

Sensus accuSTREAM and SR II meters are manufactured on modern production equipment using a Statistical Process Control system to ensure all components are made to design dimensions.

Sensus' Statistical Process Control program requires critical part dimensions to be recorded and monitored to confirm that all the machining operations are producing good parts and that no negative trends are developing.

Continuous training of the skilled Sensus work force, combined with the extensive use of automated work cells and robotics allows Sensus to maintain high quality, vary production to meet customer demand, reduce inventories and control costs.

11. A FULL RANGE OF FLOW MEASUREMENT PRODUCTS

accuSTREAM/SR II meters can be used in conjunction with any Sensus AMR/AMI system, enabling them to be used for reading routes where both residential and commercial services are mixed, if desired. Sensus offers a complete range of metering products, from residential size positive displacement meters and automatic meter reading systems to higher flow rate OMNI T² / C² / F² / R² meters, accuMAG and Propeller meters, all designed and manufactured to the same high standards of quality as Sensus PD meters.

Whenever practical, Sensus products are engineered to be synergetic with each other and upgradeable, giving water utilities more flexibility in how they can be used to suit a variety of changing needs.

12. HIGHEST QUALITY AND UNSURPASSED SERVICE

accuSTREAM and SR II meters are manufactured to the highest standards of quality of any residential cold water meter. They are backed with nationally published product guarantees for workmanship, materials and long term measurement accuracy.

All of this along with Sensus' reputation for having the finest customer service in the water industry provides the type of prompt, friendly service you can expect before, during and after you buy.

For more information, contact your Sensus authorized distributor or representative.

In the U.S. and Canada, telephone:
1-800 METER-IT, (1-800-638-3748).

From other countries, telephone:
(U.S.) 724-439-7700.

© All products purchased and services performed are subject to Sensus' terms of sale, available at either; <http://na.sensus.com/TC/TermsConditions.pdf> or 1-800-METER-IT. Sensus reserves the right to modify these terms and conditions in its own discretion without notice to the customer.

This document is for informational purposes only, and SENSUS MAKES NO EXPRESS WARRANTIES IN THIS DOCUMENT. FURTHERMORE, THERE ARE NO IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY. ANY USE OF THE PRODUCTS THAT IS NOT SPECIFICALLY PERMITTED HEREIN IS PROHIBITED.