



OMNI™ (R²) Water Meter

1-1/2" and 2" OMNI R² Meter

The OMNI R² Water Meter operation is based on advanced Floating Ball Technology (FBT).

DESCRIPTION:

- Floating Ball Technology (FBT)

ELECTRONIC REGISTER DISPLAY DIAGRAM



Totalization Mode



AMR/AMI Mode



Resettable Test Mode



Rate of Flow Mode

Conformance to Standards

The OMNI R² meter meets and far exceeds the most recent revision of ANSI/AWWA Standard C701 class II standards and exceeds performance criteria for ANSI/AWWA C700 Residential Standard using Sensus Turbo technology. Each meter is performance tested to ensure compliance. All OMNI meters are NSF/ANSI Standard 61, Annex F and G approved.

Performance

The patented measurement principles of the OMNI R² meter ensure greater accuracy, expanded accuracy range and longer service life than any other comparable class meter. The OMNI R² meter has no restrictions on sustained flow rates within its continuous range. The floating ball measurement technology allows installation in any orientation and flows up to maximum rated capacity without undue wear or accuracy degradation.

Construction

The OMNI R² meter consists of two basic assemblies; the maincase and the measuring chamber. The measuring chamber assembly includes the "floating ball" impeller with a coated titanium shaft, hybrid axial bearings, integral flow straightener and an all electronic programmable register with protective bonnet. The maincase is made from industry proven Ductile Iron with an approved NSF epoxy coating. Maincase features are; easily removable measuring chamber, unique chamber seal to the maincase using a high pressure o-ring, testing port and a convenient integral strainer.

OMNI Electronic Register

The OMNI R² electronic register is hermetically sealed with an electronic pickup containing no mechanical gearing. The large character LCD displays AMR, totalization, rate of flow and a resettable test totalizer. OMNI register features include AMR resolution units that are fully programmable and integral resettable accuracy testing feature compatible with UniPro and Sensus flow verification software. The large, easy-to-read LCD also displays both forward and reverse flow directions. The OMNI R² electronic register has a 10-year battery life guarantee.



Magnetic Drive

Meter registration is achieved by utilizing a fully magnetic pickup system. This is accomplished by the magnetic actions of the embedded rotor magnets and the ultra sensitive register pickup probe. The only moving component in water is the “floating ball” impeller.

Measuring Element

The hydro-dynamically balanced impeller floats between the bearings. The Floating Ball Technology (FBT) allows the measuring element to operate virtually without friction or wear, thus creating the extended upper and lower flow ranges capable on only the OMNI R² meter.

Strainer

The OMNI R² with the “V” shaped strainer uses a stainless steel screen along with Floating Ball Technology (FBT). This creates a design that greatly improves accuracy, even in difficult settings. A removable strainer cover permits easy access to the screen for routine maintenance.

Maintenance

The OMNI R² meter is designed for easy maintenance. Should any maintenance be required, the measuring chamber and/or strainer cover can be removed independently. Replacement parts or complete measuring chambers are available for repairs. OMNI R² replacement measuring chambers may also be utilized to upgrade some third-party meters to achieve increased accuracy and extended service life.

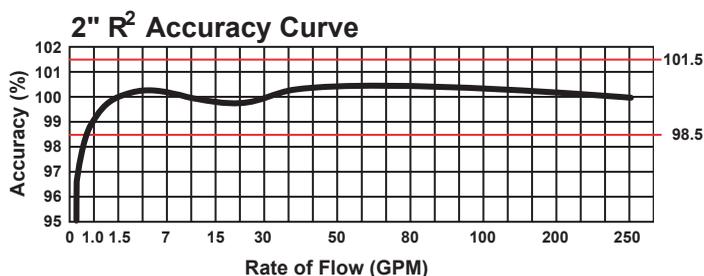
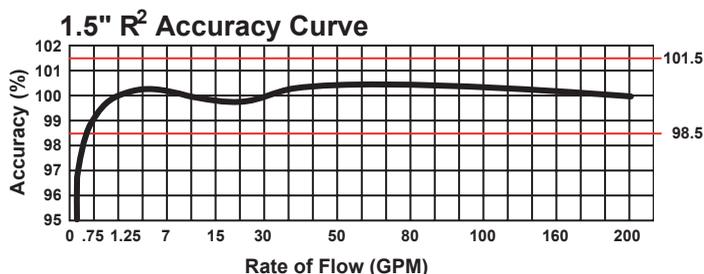
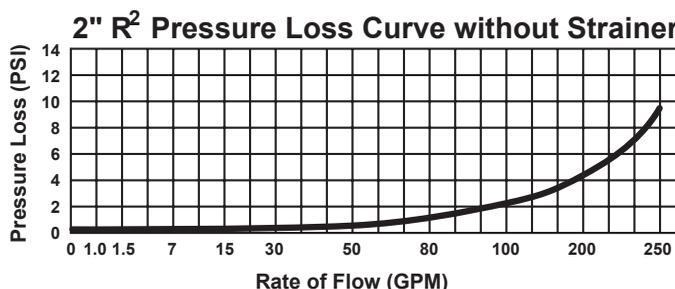
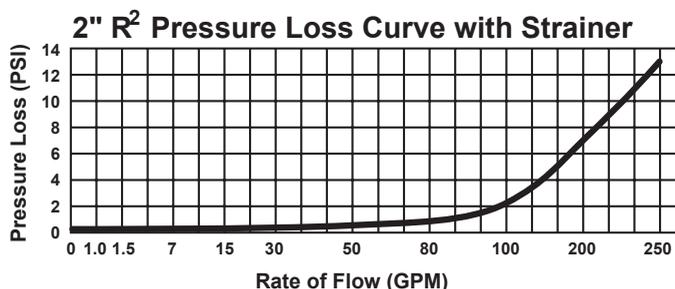
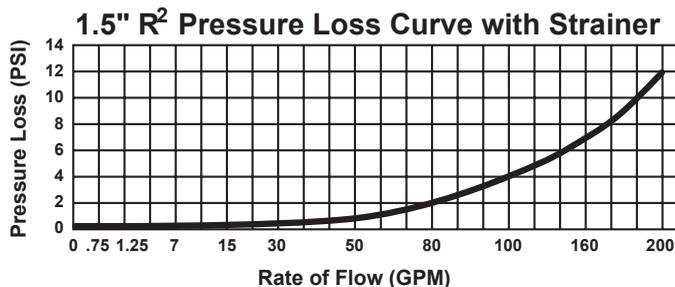
AMR/AMI Systems

Meters and Electronic Registers are compatible with current Sensus AMR/AMI systems and other AMI communication systems that use the Sensus UI1203 protocol.

Guarantee

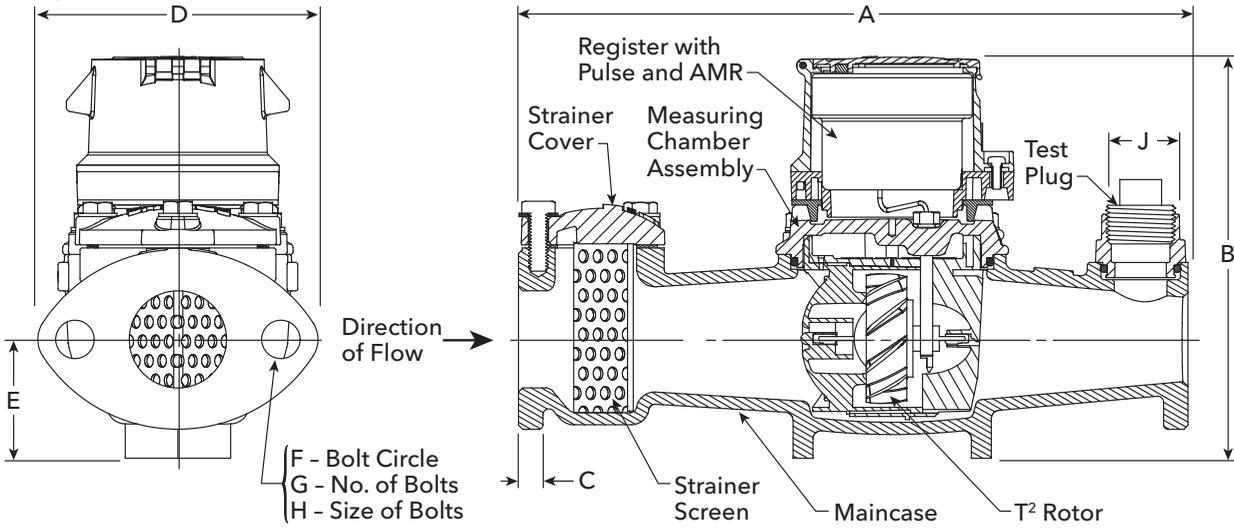
Sensus OMNI R² Meters are backed by “The Sensus Guarantee.” Ask your Sensus representative for details or see Bulletin G-500.

Head Loss Curves

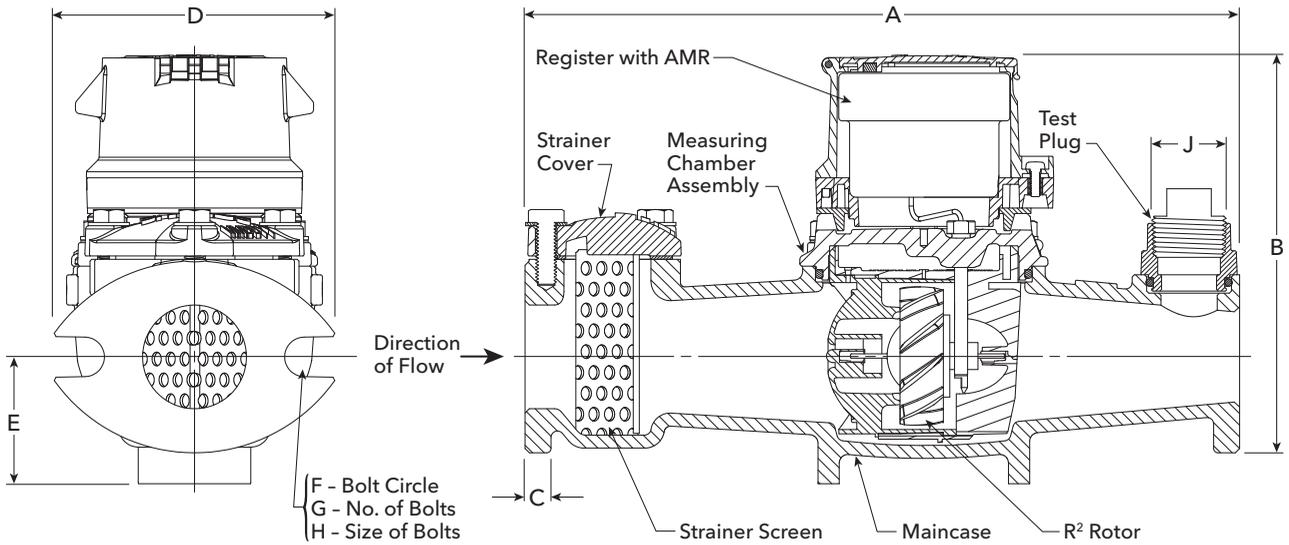




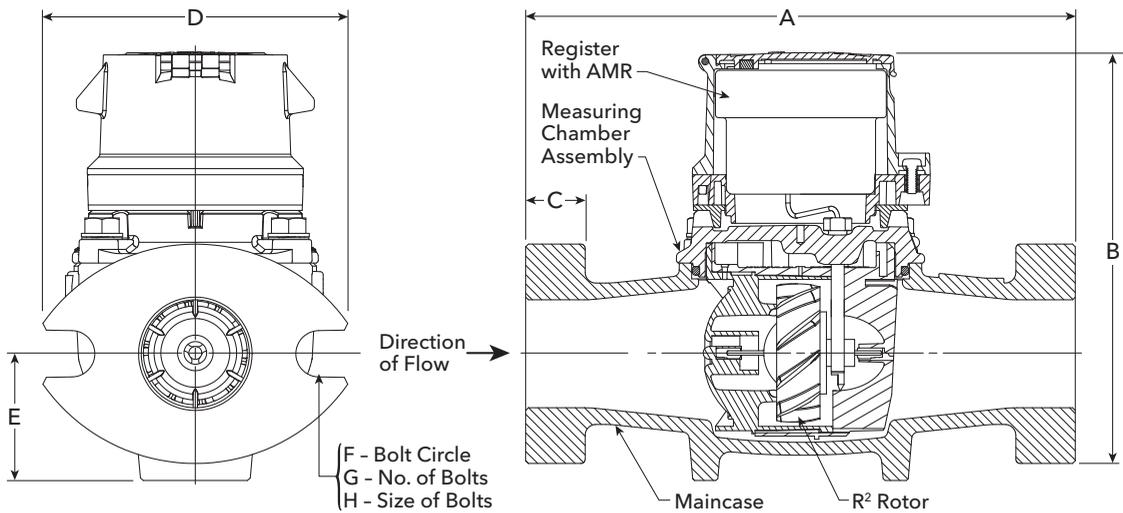
OMNI R²: 1-1/2"



OMNI R²: 2"



OMNI R²: 2" Without Strainer





Dimensions and Net Weights

Meter and Pipe Size	Normal Operating Range		Connections	A	B	C	D	E	F	G	H	J	Net Weight	Shipping Weight
1-1/2" DN 40mm	2 gpm 0.45 m ³ /hr	150 gpm 34 m ³ /hr	Flanged	13" 330mm	7-7/8" 200mm	15/16" 24mm	5-7/16" 138mm	2-5/16" 59mm	4" 102mm	2	5/8" 16mm	1" 25mm	18.8 lbs. 8.53 kg.	22.5 lbs. 10.2 kg.
2" DN 50mm	2.5 gpm 0.57 m ³ /hr	200 gpm 45 m ³ /hr	Flanged	17" 432mm	7-7/8" 200mm	1" 25mm	5-3/4" 146mm	2-5/16" 59mm	4-1/2" 114mm	2	3/4" 19mm	1-1/2" 38mm	27.4 lbs. 12.4 kg.	34.5 lbs. 15.6 kg.
2" without Strainer DN 80mm	2.5 gpm 0.57 m ³ /hr	250 gpm 57 m ³ /hr	Flanged	10" 254mm	7-7/8" 200mm	1" 25mm	5-3/4" 146mm	2-5/16" 59mm	4-1/2" 114mm	2	3/4" 19mm	N/A	17 lbs. 7.9 kg.	24.5 lbs. 11.1 kg.

Specifications

Service	Measurement of potable and reclaim water. Storage temperature: -22F (-30C) to 155F (68.3C) Operating temperatures: Air: -22F (-30C) to 150F (65.6C) Water: 33F (0.6C) to 80F (26.7C)
Operating Range (100% ± 1.5%)	1-1/2": 1.25 - 200 GPM (0.28 - 45 m ³ /hr) 2": 1.5 - 250 GPM (0.34 - 57 m ³ /hr)
Low flow (95% - 101.5%)	1-1/2": 0.75 GPM (0.17 m ³ /hr) 2": 1.0 GPM (0.23 m ³ /hr)
Maximum Continuous Operation	1-1/2": 160 GPM (36 m ³ /hr) 2": 200 GPM (45 m ³ /hr)
Maximum Intermittent Operation	1-1/2": 200 GPM (45 m ³ /hr) 2": 250 GPM (57 m ³ /hr)
Pressure Loss	1-1/2": 6.9 psi @ 160 GPM (0.48 bar @ 36 m ³ /hr) 2": 7.0 psi @ 200 GPM (0.48 bar @ 45 m ³ /hr)
Maximum Operating Pressure	200 PSI (13.8 bar)
Flange Connections	U.S. ANSI B16.1 / AWWA Class 125
Register	Fully electronic sealed register with programmable registration (Gal. /Cu.Ft./ Cu. Mtr. / Imp. Gal. / Acre Ft.) Programmable AMR/AMI reading Guaranteed 10-year battery life
NSF Approved Materials	Maincase: Coated Ductile Iron Measuring Chamber: Thermoplastic Rotor "Floating Ball": Thermoplastic Radial Bearings: Hybrid Thermoplastic Thrust Bearings: Sapphire/Ceramic Jewel Magnets: Ceramic Strainer Screen: Stainless Steel Strainer Cover: Coated Ductile Iron