



OMNI+ (R²) Water Meter

1-1/2" and 2"

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

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.

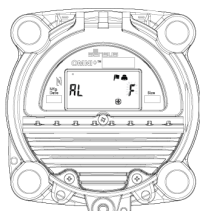
OMNI™+ REGISTER DISPLAY



Segment Test View



Totalizer View



Notification View



Flow Rate View

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.

OMNI+ Electronic Register

The OMNI+ electronic register is hermetically sealed with an electronic pickup containing no mechanical gearing. The OMNI+ register features a programmable totalizer registration, AMI/AMR reading digits, and a resettable test totalizer. The large, easy-to-read LCD also displays both forward and reverse flow directions. The OMNI+ tamper-proof security cover can be positioned in any of 270 degrees of rotation, with indexing points at each of the 90-degree customary register viewing positions.

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.

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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.

AMR/AMI Systems

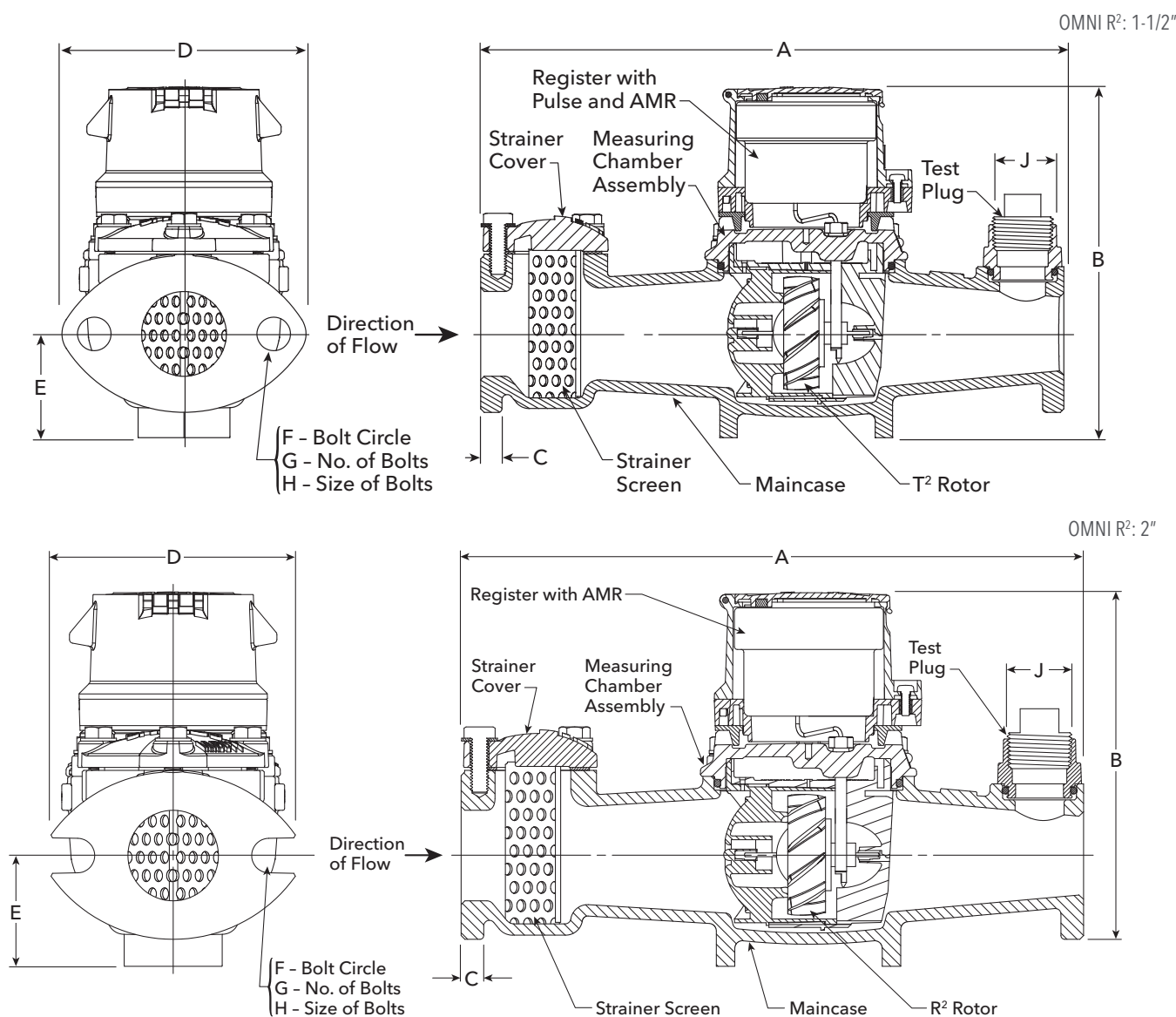
Meters and Electronic Registers are compatible with current Sensus AMR/AMI systems and other AMI communication systems that use the Sensus UI1203 protocol.

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.

Data Logging

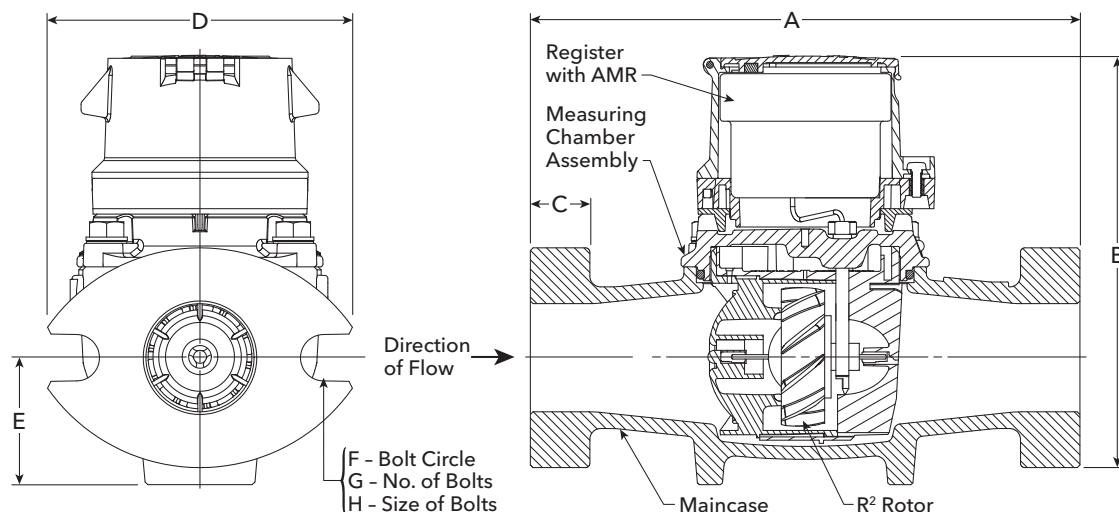
The OMNI+ R² meter logs 180 days of hourly consumption data.



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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 40 mm	2 gpm 0.45 m ³ /hr	150 gpm 34 m ³ /hr	Flanged	13" 330 mm	8-1/2" 216 mm	15/16" 24mm	5-7/16" 138 mm	2-5/16" 59 mm	4" 102 mm	2	5/8" 16 mm	1" 25 mm	18.8 lb 8.53 kg	22.5 lb 10.2 kg
2" DN 50 mm	2.5 gpm 0.57 m ³ /hr	200 gpm 45 m ³ /hr	Flanged	17" 432 mm	8-1/2" 216 mm	1" 25 mm	5-3/4" 146 mm	2-5/16" 59 mm	4-1/2" 114 mm	2	5/8" 16 mm	1-1/2" 38 mm	27.4 lb 12.4 kg	34.5 lb 15.6 kg
2" without Strainer DN 80 mm	2.5 gpm 0.57 m ³ /hr	250 gpm 57 m ³ /hr	Flanged	10" 254 mm	8-1/2" 216 mm	1" 25 mm	5-3/4" 146 mm	2-5/16" 59 mm	4-1/2" 114 mm	2	5/8" 16 mm	N/A	17 lb 7.9 kg	24.5 lb 11.1 kg

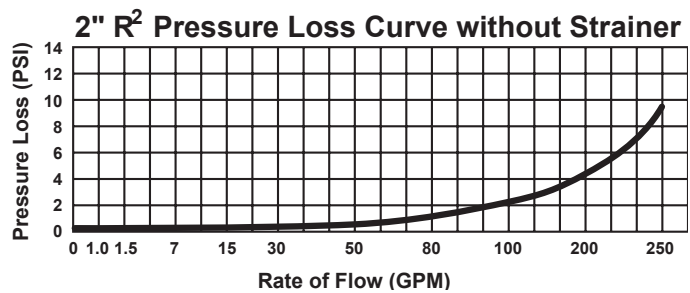
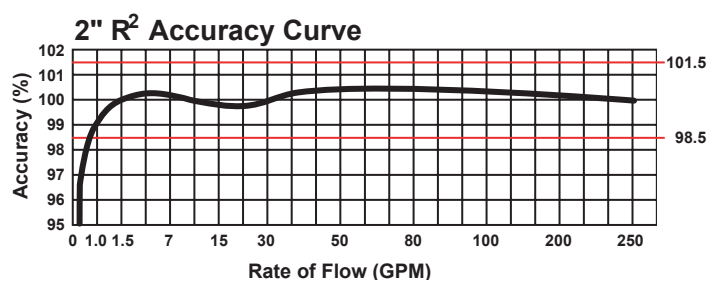
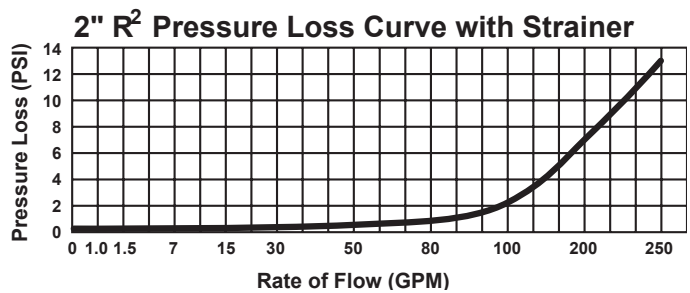
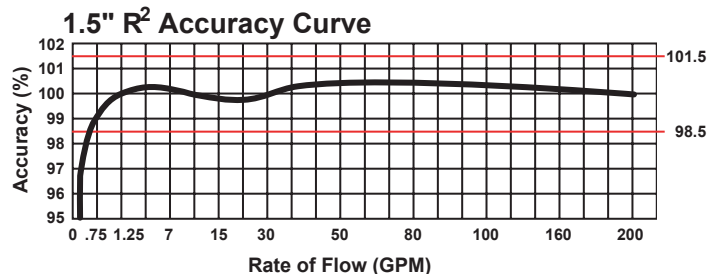
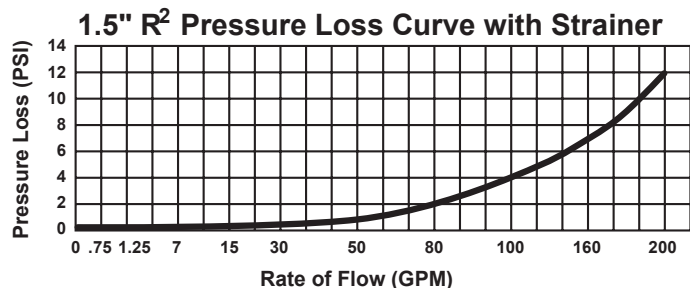
SPECIFICATIONS

Service	Measurement of potable and reclaim water. IP68 Rated. Storage temperature: -22 °F (-30 °C) to 155 °F (68.3 °C)		Operating temperatures: Air: -22 °F (-30 °C) to 150 °F (65.6 °C) Water: 33 °F (0.6 °C) to 80 °F (26.7 °C)	
Operating Range (100% ± 1.5%)	1-1/2": 2 – 150 gpm (0.45 - 34 m³/hr)		2": 2.5 – 200 gpm (0.56 – 45 m³/hr) 2" without strainer: 2.5 – 200 gpm (0.56 – 45 m³/hr)	
Low flow (95% – 101.5%)	1-1/2": 0.75 gpm (0.17 m³/hr)		2": 1.0 gpm (0.23 m³/hr) 2" without strainer: 1.0 gpm (0.23 m³/hr)	
Maximum Continuous Operation	1-1/2": 120 gpm (27 m³/hr)		2": 160 gpm (36 m³/hr) 2" without strainer: 200 gpm (45 m³/hr)	
Maximum Intermittent Operation	1-1/2": 200 gpm (45 m³/hr)		2": 250 gpm (57 m³/hr)	
Pressure Loss	1-1/2": 6.9 psi @ 160 gpm (0.48 bar @ 36 m³/hr)		2": 7.0 psi @ 200 gpm (0.48 bar @ 45 m³/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: Measuring Chamber: Rotor “Floating Ball”: Radial Bearings:	Coated Ductile Iron Thermoplastic Thermoplastic Hybrid Thermoplastic	Thrust Bearings: Magnets: Strainer Screen: Strainer Cover:	Sapphire/Ceramic Jewel Ceramic Stainless Steel Coated Ductile Iron

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Headloss Curves



Xylem.com | Sensus.com

SENSUS | 637 Davis Drive | Morrisville, NC 27560 | 800.638.3748

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