



# AQUITY™ METER



Every Neptune® Aquity meter meets or exceeds the latest AWWA Accuracy Standard C700-02.



The Aquity meter features ProRead (ARB® VI) absolute encoder technology, the most reliable and accurate reading technology available. Unlike manual meter reading (which is time-consuming and highly susceptible to human error) or remote reading via pulser technology (which can be inconsistent and vulnerable to resident tampering), encoder technology provides an exact electronic reading of odometer number wheel position. With ProRead, you can even measure water consumption at one gallon increments, compared to others that measure at the ten gallon standard. This precise system virtually eliminates the possibility of errors or underbilling, ensuring both resident and owner of efficient and trustworthy water consumption measurement.

### RELIABLE, INTEGRATED READING TECHNOLOGY

ProRead provides real-time, direct reading via a receptacle or MIU (meter interface unit) from locations up to 500 feet away. Plus, the ProRead absolute encoder allows full programmability of the register for the ultimate in flexibility — up to a 10-digit ID number, 3 user characters, 6-digit meter reading down to 5 gallon increments, and meter networking. ProRead (ARB VI) absolute encoder technology is the first step toward a totally automated meter system for greater efficiencies. The encoder provides error-free remote electronic reading capability without the need for batteries.

### MINIMUM TENANT INTRUSION

Since submeters are typically placed indoors, Neptune's nutating disc measuring element is designed to minimize noise intrusion for tenants. This quiet meter doesn't even require batteries, reducing the number of service calls. ProRead technology allows meter reading without entering the tenant's unit. This eliminates callbacks, shortens the billing cycle, and improves your cash flow.

The advanced technology reduces the administrative work and operating costs associated with metering, reading, billing, and collecting for water usage on multi-family properties. By shifting fixed water costs to tenants, property owners can generate additional profits each month, and the Aquity meter can pay for itself in less than two years.

### SYSTEMS COMPATIBILITY

Adaptability to all present and future systems is available only with Neptune's ARB® Utility Management Systems™.

Every Aquity meter meets or exceeds the latest AWWA Accuracy Standard C700-02. Its nutating disc positive displacement principle is time proven for accuracy and dependability since 1892, ensuring maximum revenue.

### KEY FEATURES

- ProRead Absolute Encoder Register
  - Registers are designed for moisture protection in humid environments
  - Tamperproof meter seal to deter thefts
  - Full sweep dial face for testing
  - 1:1 ratio low flow indicator detects leaks
  - Bayonet mount allows in-line serviceability
  - Date of manufacture, size and model stamped on dial face
- No-Lead Maincase
  - Made from no-lead high copper alloy
  - ANSI/NSF 61 certified
  - Sturdy, durable, corrosion resistant
  - Resists internal pressure stresses and external damage
  - Handles in-line piping variations and stresses
  - Residual value
- Nutating Disc Measuring Chamber
  - Positive displacement
  - Widest effective flow range
  - Corrosion resistant
  - Floating chamber design is unaffected by meter position or in-line piping stress
  - Minimal noise and vibration compared to piston

### WARRANTY

Neptune provides a limited warranty with respect to its Aquity water meters for performance, materials and workmanship.

When desired, maintenance is easily accomplished either by replacement of major assemblies or individual components.

## CONSTRUCTION

The Aquity meter consists of three major assemblies: ProRead absolute encoder register, a cast bronze maincase made from a no-lead high copper alloy, and a nutating disc measuring chamber.

For reading convenience, the register can be mounted in any of four positions on the meter. The corrosion-resistant maincase will withstand most service conditions, internal water pressure, rough handling and in-line piping stress. For frost protection, synthetic polymer or cast iron bottom caps are available.

The innovative floating chamber design of the nutating disc measuring element

protects the chamber from frost damage while the unique chamber seal extends the low flow accuracy by sealing the chamber outlet port to the maincase outlet port. The nutating disk measuring element utilizes corrosion-resistant material throughout and a thrust roller to minimize wear.

## GUARANTEED SYSTEMS COMPATIBILITY

All Aquity water meters are guaranteed adaptable to Neptune meter reading systems without removing the meter from service.

## OPERATING CHARACTERISTICS

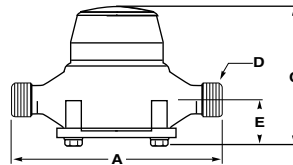
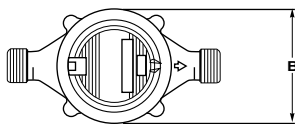
Meter Size	Normal Operating Range @100% Accuracy ( $\pm 1.5\%$ )	AWWA Standard	Low Flow @ 95% Accuracy
5/8"	1/2 to 20 US gpm 0.11 to 4.55 m <sup>3</sup> /h	1 to 20 US gpm 0.23 to 4.5 m <sup>3</sup> /h	1/4 US gpm 0.03 m <sup>3</sup> /h

## REGISTRATION

Registration (per sweep hand revolution)			Register Capacity (6-wheel odometer)		
		5/8"			5/8"
1	US Gallon	3	1,000,000	US Gallons	3
10	US Gallons	3	10,000,000	US Gallons	3
1	Cubic Foot	3	1,000,000	Cubic Feet	3
0.1	Cubic Metre	3	100,000	Cubic Metres	3
0.01	Cubic Metre	3	10,000	Cubic Metres	3

## DIMENSIONS

Meter Size	A	B	C-Pro per inch	D-Threads per inch	D OD	E in/mm
5/8" x 3/4"	6 92	3 5/8 137	5 5/8	11 1/2	1.290 33	1 5/8 41



## SPECIFICATIONS

- Certification: ANSI/NSF 61
- Size: 5/8" x 3/4"
- Weight (approx.): 4 lbs/1.8 kg
- Application: cold water measurement of flow in one direction, vertically or horizontally installed
- Maximum operating pressure: 150 psi (1034 kPa)
- Register: ProRead AutoDetect 6-wheel encoder, E-Coder, E-Coder)R900/
- Measuring chamber: nutating disc, synthetic
- Maximum operating temperature: 80°F

## OPTIONS

- Units of measure:
  - U.S. gallons
  - Cubic feet
  - Cubic metres
- Electronic accessory equipment:
  - ProRead/Programmer
  - Advantage
  - Pocket ProReader RF
  - DAP Handheld
- Bottom caps:
  - Cast iron
  - Synthetic polymer
  - No-lead high copper alloy

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications without notice.

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