



# MACH 10® ULTRASONIC METER

Sizes: 5/8", 3/4", and 1"

The MACH 10® is Neptune's newest water meter that offers solid state metrology with a rugged, lead free bronze maincase. The MACH 10 was designed to have the look and feel of a traditional water meter to help eliminate new technology concerns of your customers. Engineered to fit into even the smallest residential meter boxes, the MACH 10 fits the bill for all meter applications. At first glance you know the MACH 10 is a water meter... "Made in America."



### MAXIMIZE REVENUE

The extended low-flow accuracy of the MACH 10 allows you to measure virtually every drop used by your customers. Maintaining this level of meter performance over the life of the meter will maximize your utility's revenue stream from your metering program. The MACH 10 features no moving parts. Because there are no internal parts that can wear over time, there is no opportunity for accuracy loss over the life of the meter (flat accuracy curve).

*No wear = No accuracy loss = Maximum revenue dollars*

### NO MAINTENANCE REQUIRED

Imagine having a residential meter with no moving parts and a 20-year battery life. Is that really possible? The answer is, "Yes" – the MACH 10.

*No moving parts = No wear + 20-year battery = Maintenance free for life*

### SOLID STATE METROLOGY WITH SOLID BRONZE MAINCASE

The MACH 10 provides the best of both worlds, solid state metrology with a rugged, lead free, bronze maincase. With the MACH 10, there is no concern over breaking plastic meter spuds or cross-threading of plastic threads because there are none. Neptune believes that if a meter is capable of providing sustained accuracy over its life, the maincase should be designed to last the meter's lifetime as well. This is why we designed the MACH 10 solid state meter with a solid bronze maincase. The corrosion-resistant, lead-free, high-copper alloy maincase is built to withstand demanding service conditions; internal water pressure, rough handling during installation, and in-line piping stresses.

*Field proven NSF/ANSI 61 bronze maincase = Confidence = No stranded assets*

### OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range @ 100% Accuracy (+/- 1.5%)	AWWA Standard	Low Flow @ 97% Accuracy
5/8"	0.10 to 25 US gpm 0.02 to 4.55 m³/h	1 to 20 US gpm 0.23 to 4.5 m³/h	0.05 US gpm 0.01 m³/h
3/4"	0.10 to 35 US gpm 0.02 to 6.82 m³/h	2 to 30 US gpm 0.45 to 6.8 m³/h	0.05 US gpm 0.01 m³/h
1"	0.38 to 55 US gpm 0.08 to 11.36 m³/h	3 to 50 US gpm 0.68 to 11.4 m³/h	0.15 US gpm 0.03 m³/h

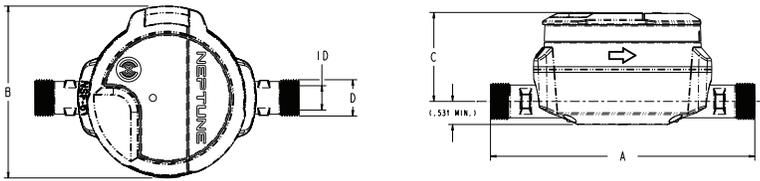
### KEY BENEFITS

- Extended low-flow range and accuracy
- No maintenance plus accuracy sustained over meter life
- Regulatory compliance – peace of mind
- Health and asset protection with the highest lead free legislation compliance
- Supports Water Conservation
  - Provides leak history/diagnostics
  - Enables proactive leak notification
- Onsite customer event troubleshooting tools
- Increased operational efficiencies
  - Workorder reduction for high water bill inquiries
  - Drought management
  - Reduction of water loss through proactive notification of water leaks
- Tamper management
  - Identification and prioritization of potential tamper situations

### KEY FEATURES

- Advanced ultrasonic technology
- No moving parts
- NSF/ANSI 61 approved meter – lead free, bronze maincase
- 20-year battery life
- "Absolute" 9-digit meter reading on display
- 8-digit remote meter reading
- Long-life lithium thionyl-chloride batteries
- Single design for pit and inside set applications
- Submersible in pit environments
- True point-of-use leak detection\*
- Tamper detection\*
- Reverse flow detection\*
- LCD leak indicators
- Directional flow indicator
- Rate of flow on LCD display
- Data logging\*\*

\* When connected to Neptune R900® or R450® RF MIUs.  
\*\* When connected to R900v4 or newer version.



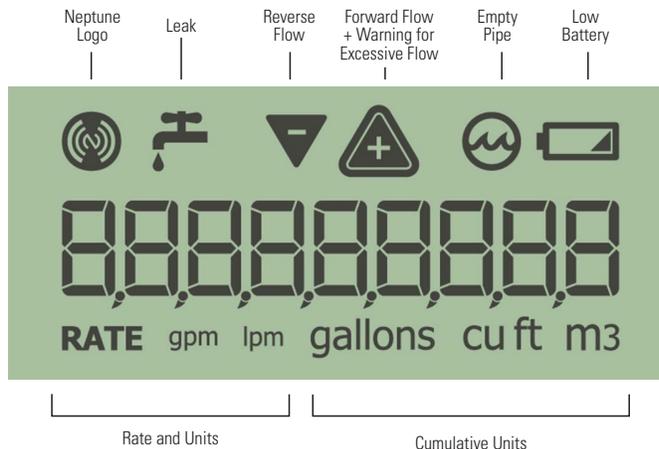
### DIMENSIONS

Meter Size	A	B	C	D NSPM	ID
5/8"	7 1/2"	4 7/8"	2 17/32"	1.030	0.69"
5/8" x 3/4"	7 1/2"	4 7/8"	2 17/32"	1.290	0.69"
3/4"	9"	4 7/8"	2 19/32"	1.290	0.755"
3/4" SL	7 1/2"	4 7/8"	2 19/32"	1.290	0.755"
3/4" x 1"	9"	4 7/8"	2 19/32"	1.626	0.755"
1"	10 3/4"	4 7/8"	2 23/32"	1.626	1"
1" x 1 1/4"	10 3/4"	4 7/8"	2 23/32"	1.865	1"

### REGISTRATION

High Resolution (8-digit reading)		5/8"	3/4" & 1"
0.1	US Gallons	✓	✓
0.1	Imperial Gallons	✓	✓
0.01	Cubic Feet	✓	✓
0.001	Cubic Metres	✓	✓

### LCD DISPLAY



### SPECIFICATIONS

- AWWA C700 compliant
- NSF/ANSI 61 certified
- Application: Cold water measurement of flow in residential potable, combination potable and fire service, and reclaim/secondary water applications.
- Maximum operating water pressure: 175 psi
- Maximum operating water temperature: 100°F

### OPTIONS

- Sizes:
  - 5/8", 5/8" x 3/4"
  - 3/4", 3/4" x 1"
  - 1", 1" x 1 1/4"
- Units of measure: U.S. gallons, Imperial gallons, cubic feet, cubic metres
- Meter options:
  - Potable water
  - Reclaim water
  - Residential fire service (combo or standalone meter service lines)
- Environmental conditions:
  - Operating temperature: +14°F to +149°F (-10°C to +65°C)
  - Storage temperature: -40°F to +158°F (-40°C to +70°C)

### WARRANTY

Neptune provides a limited warranty with respect to its MACH 10 residential line of ultrasonic meters for performance, materials, and workmanship.

### AMR/AMI SYSTEM COMPATIBILITY

All MACH 10 residential ultrasonic meters provide ProRead™, E-Coder® 8-digit, and E-CoderPLUS protocols to interface with Neptune and third-party AMR/AMI meter reading systems.

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