



A PRODUCT SHEET OF NEPTUNE TECHNOLOGY GROUP

# Double Check T-10<sup>®</sup> Backflow Meter



Today, utilities are faced with cross-connection regulations while challenged to meet rising homeland security initiatives. The Neptune<sup>®</sup> T-10<sup>®</sup> Double Check backflow meter delivers a positive drip-tight seal for protection from the reverse flow of non-potable liquids brought about by a cross-connection breach. The 5/8" T-10 Double Check backflow meter may be used in the following applications:

## Problem

- Fire protection systems
- Residential services
- Plumbing systems
- Other systems requiring low hazard protection

The 5/8" T-10 Double Check backflow meter can be fully upgraded to all Neptune ARB<sup>®</sup> Utility Management Systems<sup>™</sup> components, such as ProRead<sup>™</sup>, ProCoder<sup>™</sup>, E-CODER<sup>®</sup>, E-CODER<sup>®</sup>R900i<sup>™</sup>, E-CODER<sup>®</sup>R450i<sup>™</sup> or the E-CODER<sup>®</sup>L900i<sup>™</sup>. When coupling the E-CODER<sup>®</sup>R900i, E-CODER<sup>®</sup>R450i, or the E-CODER<sup>®</sup>L900i<sup>™</sup> with the T-10 backflow meter, Neptune is able to offer an innovative solution for utilities that implement a backflow program. The reverse flow detection of the E-CODER<sup>®</sup>R900i, E-CODER<sup>®</sup>R450i, and E-CODER<sup>®</sup>L900i offer utilities 365 days of 15-minute interval reverse flow monitoring to ensure that the device is functioning properly.

## Construction

The 5/8" T-10 Double Check backflow meter has the same standard laying length (7 1/2 inches) as a regular 5/8" T-10 water meter while including an integral backflow device in the same meter design. The measuring element in the T-10 Double Check backflow meter is the same as our standard T-10 water meter; therefore, this product has the same extended low-flow accuracy that meets or exceeds the latest AWWA C700 standard. In normal flow conditions, the independently operating check valves remain closed until there is a demand for water. Each of the checks is designed to open at approximately one psi pressure differential in the direction of flow. At cessation of flow or under a back pressure condition, both checks will close until normal flow is resumed.

## Approvals

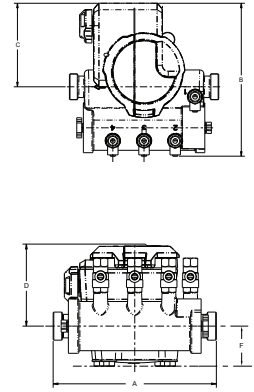
The T-10 Double Check backflow meter is NSF/ANSI 372 certified and approved by the ASSE (American Society for Sanitation Engineering) 1015. It is rated as a 1/2" backflow device.

## KEY FEATURES

- Integral double check backflow device and T-10 meter design
- Lead free copper alloy maincase
- Positive displacement, nutating disc measuring chamber
- Extended low-flow accuracy
- Cartridge check assemblies for ease of serviceability
- Fits standard 5/8" meter lay length
- Ability to upgrade to AMR seamlessly
- Test cocks are vertically oriented for ease of testing in tight areas
- Provides significant labor savings due to reduced installation costs in retrofit applications
- Provides 365-day, 15-minute interval reverse flow monitoring with E-CODER<sup>®</sup>R900i, E-CODER<sup>®</sup>R450i, or E-CODER<sup>®</sup>L900i register
- Supports cross-connection control measures
- Enhances customer service by providing security protection against cross-connection
- NSF/ANSI 372
- ASSE 1015

## Dimensions

Meter Size	A in/ mm	B in/ mm	C		D		Threads NPSM	E OD in/ mm	F in/ mm	G in/ mm	Approx. Weight lbs/kg
			Std. ARB in/ mm	E-CODER)R900i, E-CODER)R450i ProCoder)R900i, or ProCoder)R450i in/mm	Std. in/ mm	ARB in/ mm					
5/8"	7 1/2 191	7 3/4 197	2 3/4 70	4 1/4 108	2 7/8 73	3 5/8 92	3 5/8 92	1.030 26	1 3/4 44	2 5/8 67	8 3.6
5/8" X 3/4"	7 1/2 191	7 3/4 197	2 3/4 70	4 1/4 108	2 7/8 73	3 5/8 92	3 5/8 92	1.290 33	1 3/4 44	2 5/8 67	8 3.6



## Operating Characteristics

Meter Size	Normal Operating Range @100% Accuracy (±1.5%)	AWWA Standard	Low Flow @ 95% - 101% Accuracy
5/8"	1/2 to 20 US gpm 0.11 to 4.55 m³/h	1 to 20 US gpm 0.23 to 4.5 m³/h	1/8 US gpm 0.03 m³/h

## Systems Compatibility

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

### Maximum Operating Water Pressure

- 175 psi

### Maximum Operating Water Temperature

- T-10 meter accuracy rated to +80°F
- Backflow assembly rated to +110°F

### Register

- Direct reading: synthetic polymer box and cover, bronze box and cover
- Remote reading: ARB V, ProRead, ProCoder, E-CODER, E-CODER)R900i, E-CODER)R450i, E-CODER)L900i, TRICON/S, TRICON/E3

### Reverse Flow Protection

- Two stainless steel spring-loaded check valves

### Measuring Chamber

- Positive displacement, nutating T-10 disc

### Bottom Caps

- Synthetic polymer
- Cast iron
- Lead free, high-copper alloy

### Environmental Conditions

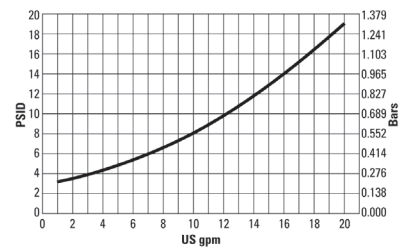
- Operating temperature: -22°F to +149°F (-30°C to +65°C)
- Storage temperature: -40°F to +158°F (-40°C to +70°C)
- Operating humidity: 0 to 95% non-condensing

## Warranty

Neptune provides a limited warranty with respect to its T-10 water meters for performance, materials, and workmanship. When desired, maintenance is easily accomplished either by replacement of major assemblies or individual components.

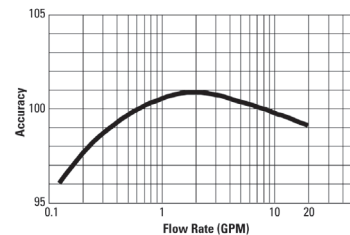
## Pressure Loss

(Rate of Flow in Gallons per Minute)



## Accuracy

(Rate of Flow in Gallons per Minute)



These charts show typical meter performance. Individual results may vary.

## Guaranteed Systems Compatibility

All T-10 water meters are guaranteed adaptable to our ARB® V, ProRead, ProCoder E-CODER, E-CODER)R900i, E-CODER)R450i, E-CODER)L900i, TRICON®/S, TRICON/E3®, and Neptune meter reading systems without removing the meter from service

