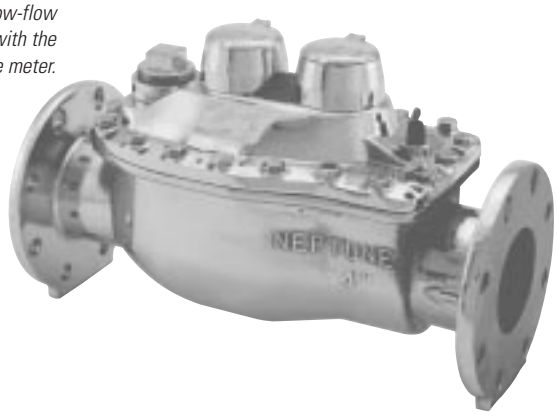
NEPTUNE®

Neptune Technology Group Inc.

Tru/Flo™ Compound Meter

Sizes: 2”HP, 3”, 4”, 6”, and 6”x8”

Tru/Flo meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.



All Tru/Flo Compound water meters meet or exceed the latest performance and accuracy requirements set by the AWWA C702, and maximum continuous flow rates may be exceeded by as much as 25% for intermittent periods.

Application

The Tru/Flo Compound water meter is designed to register wide-flow ranges where varying flow rates are typical. Tru/Flo meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.

Operation

The hydraulic valve transfers flow smoothly between the disc section and turbine section of the meter, minimizing the loss of accuracy in the crossover range. The turbine measuring element registers high flows and the disc measuring element registers low flows, ensuring accurate measurement at all flow rates.

Construction

The Tru/Flo consists of a durable bronze maincase, Neptune Turbine measuring element, Neptune T-10 chamber, a patented hydraulic valve, and two magnetic-driven, roll-sealed registers.

The 6" x 8" Tru/Flo assembly consists of two 8" x 6" concentric reducers, a 6" Neptune strainer, and a 6" Neptune Tru/Flo Compound meter.

The bronze maincase is corrosion resistant, lightweight, and easy to handle.

A calibration vane allows field calibration of the UME to lengthen service life and to ensure accurate registration.

The two magnetic-driven, roll-sealed registers simplify the meter’s design and reduce long-term maintenance by eliminating complicated combining drive mechanisms. For reading convenience, the registers can be mounted in any one of four positions on the meter.

Systems Compatibility

Adaptability to all present and future systems for flexibility.

Key Features

- **Patented hydraulic valve design***
- **Minimum loss of accuracy in the crossover range increases revenue**
- **Spring-loaded valve eliminates need for frequent adjustment and service**
- **Combined Turbine and Disc Measuring Elements**
  - Industry-leading flow ranges at 98.5%–101.5% accuracy ensure maximum revenue
  - Direct coupling of rotor to gear train ensures accurate registration
  - Unitized Measuring Element (UME) makes maintenance easier and faster with less downtime
  - Calibration vane allows in-line service to extend life and ensure accurate registration
- **Compact Bronze Maincase**
  - Made from EnviroBrass® II
  - Compact, lightweight design provides for easy installation and in-line serviceability

*U.S. patent nos. 4,437,344 and 4,429,571

Tru/Flo™ Compound Meter

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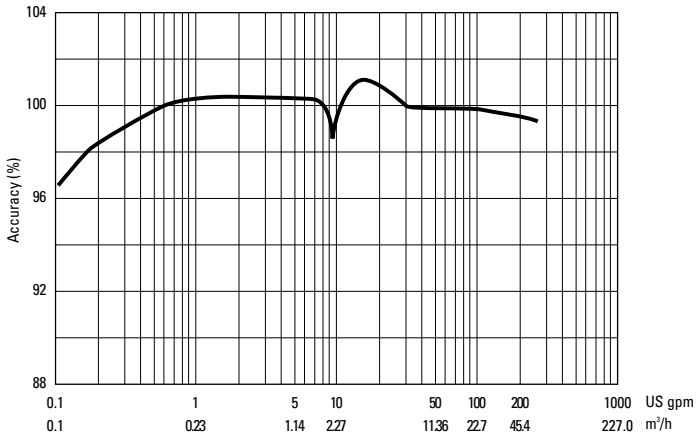
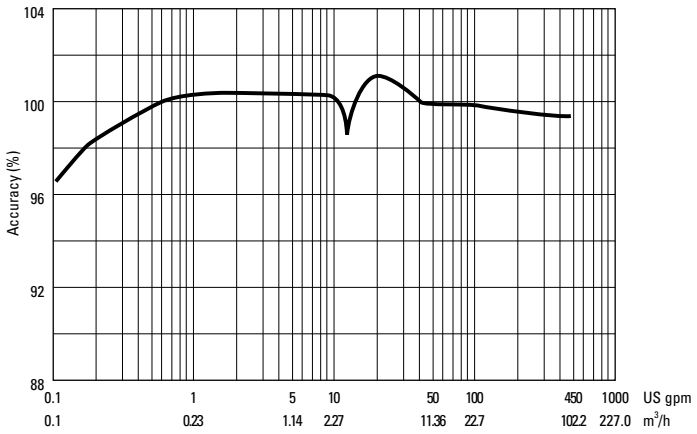
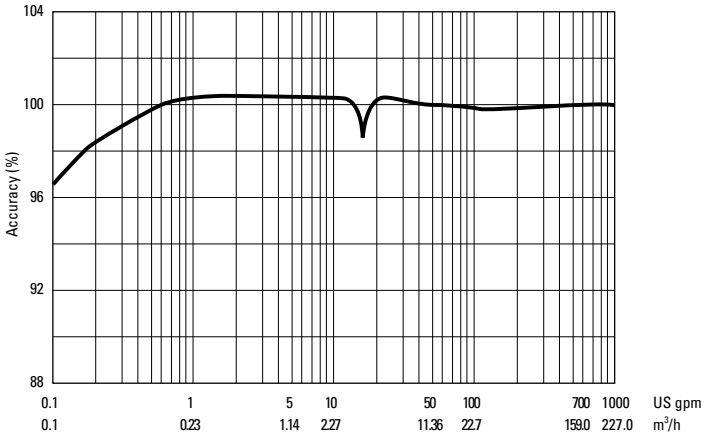
2” Accuracy



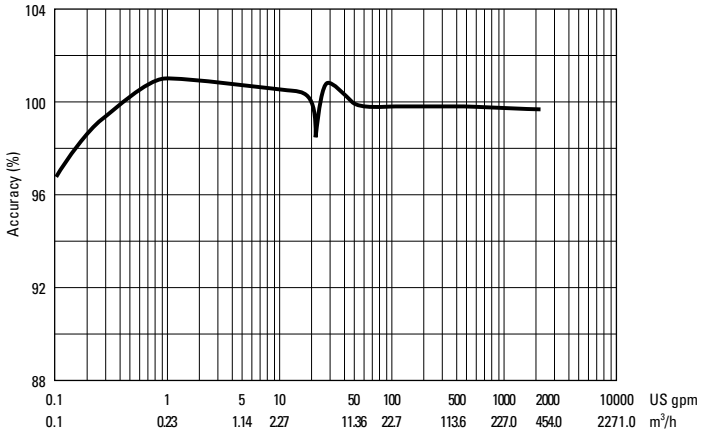
3” Accuracy



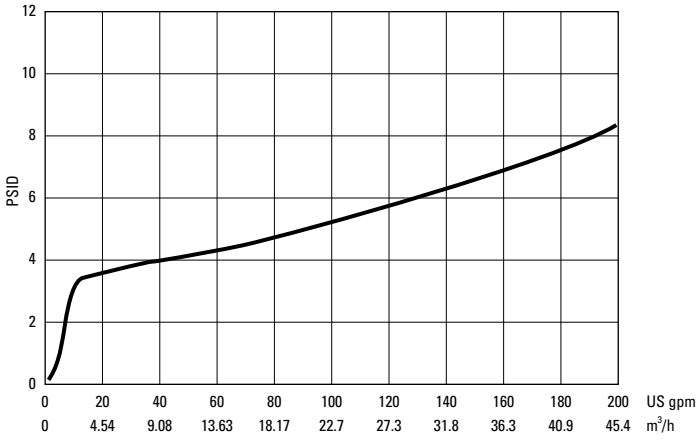
4” Accuracy



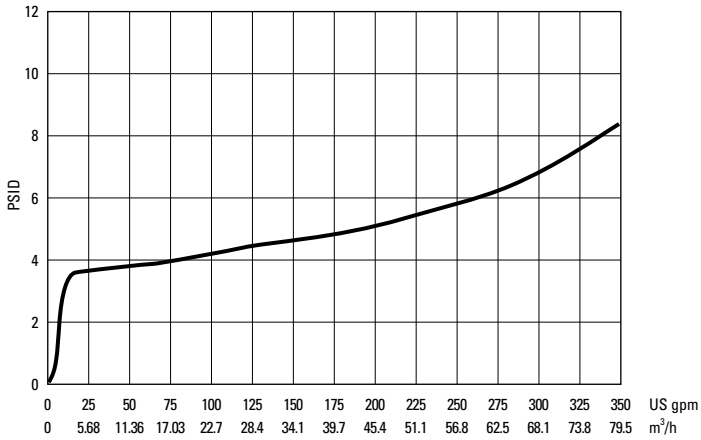
6” Accuracy



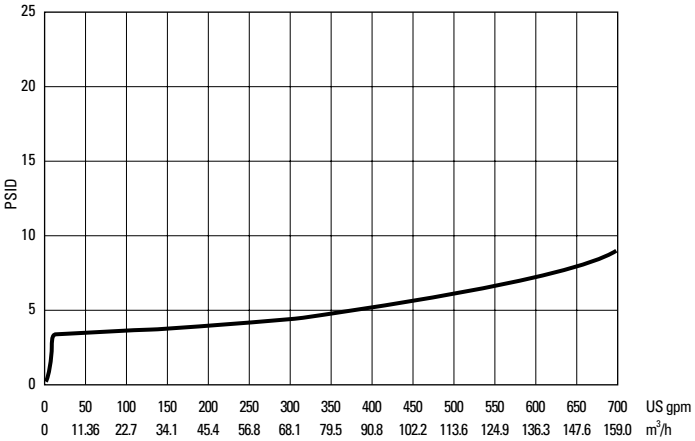
2” Pressure Loss



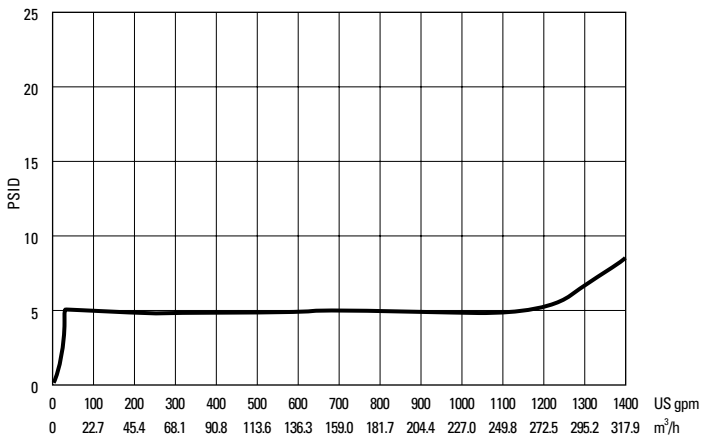
3” Pressure Loss



4” Pressure Loss



6” Pressure Loss



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

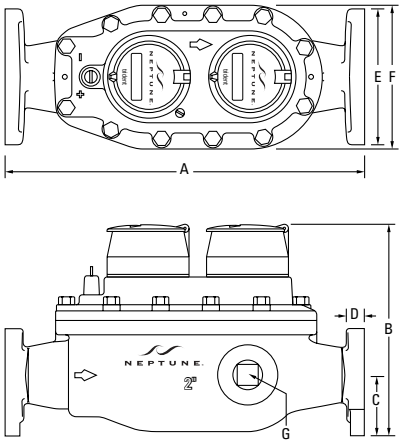
Operating Characteristics

Meter Size	Normal Operating Range @100% Accuracy (±1.5%)	AWWA Standard	Low Flow @ 95% Accuracy
2"	1/2 to 200 US gpm 0.11 to 45.4 m³/h	2 to 160 US gpm .454 to 36.34 m³/h	1/8 US gpm 0.03 m³/h
3"	1/2 to 450 US gpm 0.11 to 102.2 m³/h	4 to 320 US gpm .91 to 72.68 m³/h	1/8 US gpm 0.03 m³/h
4"	1 to 1000 US gpm 0.23 to 227.1 m³/h	6 to 500 US gpm 1.36 to 113.56 m³/h	1/2 US gpm 0.11 m³/h
6"	1 1/2 to 2000 US gpm 0.34 to 454.2 m³/h	10 to 1000 US gpm 2.27 to 227.12 m³/h	3/4 US gpm 0.17 m³/h
6" x 8"	1 1/2 to 2000 US gpm 0.34 to 454.2 m³/h	16 to 1600 US gpm 3.63 to 363.4 m³/h	3/4 US gpm 0.17 m³/h

Registration

Registration (per sweep hand revolution)		Turbine Side 2", 3", 4"	Turbine Side 6", 6"x8"	Disc Side 2",3",4"	Disc Side 6",6"x8"
1,000	US Gallons		✓		
1,000	Imperial Gallons		✓		
100	US Gallons	✓			
100	Imperial Gallons	✓			
100	Cubic Feet		✓		
10	US Gallons			✓	
10	Imperial Gallons			✓	
10	Cubic Feet	✓			
10	Cubic Metres		✓		
1	Cubic Foot			✓	
1	Cubic Metre	✓			
0.1	Cubic Metre			✓	

Register Capacity (6-wheel odometer)		Turbine Side 2", 3", 4"	Turbine Side 6", 6"x8"	Disc Side 2",3",4"	Disc Side 6",6"x8"
1,000,000,000	US Gallons		✓		
1,000,000,000	Imperial Gallons		✓		
100,000,000	US Gallons	✓			
100,000,000	Imperial Gallons	✓			
100,000,000	Cubic Feet		✓		
10,000,000	US Gallons			✓	
10,000,000	Imperial Gallons			✓	
10,000,000	Cubic Feet	✓			
10,000,000	Cubic Metres		✓		
1,000,000	Cubic Feet			✓	
1,000,000	Cubic Metres	✓			
100,000	Cubic Metres			✓	



Dimensions

Meter Size	A in/mm	B-Std in/mm	B-ARB in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	Flange Type	Weight lbs/kg
2" HP	15 1/4 387	8 5/8 219	9 229	2 1/2 64	13/16 21	5 7/8 149	6 152	1 1/2 NPT 38	2" Oval 150 lb	32 14.5
3"	17 432	10 1/2 267	11 279	3 3/4 95	5/8 16	7 1/2 191	8 1/2 216	1 1/2 NPT 38	3" ANSI 150 lb	72 32.7
4"	20 508	12 1/2 318	13 330	4 1/2 114	11/16 17	9 229	9 1/8 232	2 NPT 51	4" ANSI 150 lb	100 45.4
6"	24 610	15 3/4 400	16 1/4 413	5 1/2 140	1 25	11 279	12 3/4 324	2 NPT 51	6" ANSI 150 lb	208 94.3
6"x8"	55 3/8 1407	15 3/4 400	16 1/4 413	5 1/2 140	1 25	11 279	12 3/4 232	2 NPT 51	6" ANSI 150 lb	460 208.5

Warranty

Neptune provides a limited warranty with respect to its Tru/Flo Compound water meters for performance, materials and workmanship.

When desired, owner maintenance is easily accomplished by in-line replacement of major components, or a factory calibrated UME.

Guaranteed Systems Compatibility

All Neptune Tru/Flo Compound meters are guaranteed adaptable to our ARB®V, ProRead AutoDetect, TRICON®/S, TRICON/E3®, and Neptune meter reading systems without removing the meter from service.

Specifications

- Application: cold water measurement of flow in one direction
- Maximum operating pressure: 150 psi (1206 kPa)
- Maximum operating temperature: 80°F
- Register: direct reading, center sweep, roll-sealed, magnetic drive with low-flow indicator
- Measuring element:
  - AWWA Class II Turbine, dual suspension
  - Nutating disc

Options

- Sizes: 2"HP, 3", 4", 6", and 6"x8"
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register types:
  - Direct reading: bronze box and cover (standard)
  - Remote reading systems*: ProRead AutoDetect, TRICON/S, TRICON/E3
  - Reclaim
- Companion flanges:
  - 2", 3", 4" bronze or cast iron
  - 6", 6" x 8" cast iron
- Strainer: 2", 3", 4", 6" bronze

* Consult factory for meter performance specifications when fitted with ARB.

NEPTUNE®

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