



**Badger Meter**

## Recordall® Turbo Series Meters Models 6600 (16") & 10000 (20")

### DESCRIPTION

Recordall Turbo Series meters meet or exceed the most recent revision of AWWA Standard C701 Class II Standards and are available in cast iron for the 16" and 20" meters. Turbo Series meters comply with the lead-free provisions of the Safe Drinking Water Act.

Designed for commercial and industrial applications, the Recordall Turbo Series meter is the smart choice for larger facilities including hotels, apartment buildings, irrigation centers and manufacturing and processing plants. You can count on the Turbo Series meter to help reduce your day-to-day maintenance costs, while delivering accurate and efficient performance.

**Models 6600 and 10000 are designed for 16" and 20" applications. These meters feature:**

- Direct coupled turbine based on an exclusive "floating rotor" design that reduces bearing friction and associated wear and tear.
- Low pressure loss for improved system efficiency.
- Exceptional registration accuracy across low flow rate, normal operating flow rate and maximum continuous operation flow.
- Permanently sealed, tamper-resistant register.
- Meters and encoders are compatible with Badger Meter AMR/AMI meter reading systems and other approved reading technologies.

**Applications:** Recordall Turbo Series meters are designed for cold water, commercial and industrial applications where flows are consistent medium to high flows. Applications include hotels, apartment buildings, irrigations centers and manufacturing and processing plants. Turbo Series meters help reduce day-to-day maintenance costs while delivering accurate and efficient performance.

**Operation & Performance:** Direct magnetic drive is achieved when the magnet carrier is driven by a gear train coupled to the rotor. The gear train consists of two sets of gears connected by a vertical transmission shaft. One gear set is at the magnet carrier, the other is a worm gear set at the rotor shaft. When water flows into the Turbo Series meter measuring element, it contacts the multi-vaned rotor. The resulting rotor rotation is then transmitted by magnetic coupling to a sealed register or encoder. The direct magnetic drive is built to provide a reliable meter-to-registration coupling.



**Tamper-Proof Features:** Unauthorized removal of the register or encoder is inhibited by the option of a tamper detection seal wire screw, TORX® tamper-resistant seal screw or the proprietary tamper-resistant keyed seal screw. Each can be installed at the meter site or at the factory.

**Construction:** The Recordall Turbo Series meter is constructed in compliance with ANSI and AWWA C701 standards. It consists of the following basic components: meter housing, interchangeable, unitized measuring element and permanently sealed direct reading registers or encoders.

The measuring element consists of the transmission coupling, rotor, inlet and outlet straightening vanes with nose cones, and calibration ring assembly. The unique inlet and outlet straightening vanes minimize swirl from piping arrangements upstream as well as downstream.

A strainer is recommended to help ensure optimal flow conditioning and protection for the measuring element. Badger Meter offers dual flange plate strainers—sizes 16" and 20"—in fabricated steel.

To simplify maintenance, the registers or encoders and measuring elements can be removed without removing the meter housing. Interchangeability of certain parts between meters also minimizes spare parts inventory investment.

**Meter Installation:** The meter is designed for installations where flow is in one direction only. Companion flanges for installation of meters on various pipe types and sizes are available in cast iron as an option. See the Recordall Turbo Series Meters User Manual for specific instructions.

## SPECIFICATIONS

Turbo Series Model	6600 16" (400 mm)	10000 20" (500 mm)
Meter Flanges	Raised-Face Round	Raised-Face Round
Typical Operating Range (100% ± 1.5%)	150...13,200 gpm (34.1...3000 m <sup>3</sup> /h)	300...19,800 gpm (68.1...4500 m <sup>3</sup> /h)
Typical Low Flow (95% minimum)	130 gpm (29.5 m <sup>3</sup> /h)	200 gpm (45.4 m <sup>3</sup> /h)
Maximum Continuous Flow	6600 gpm (1500 m <sup>3</sup> /h)	10,000 gpm (2270 m <sup>3</sup> /h)
Maximum Intermittent Flow	13,200 gpm (3000 m <sup>3</sup> /h)	19,800 gpm (4500 m <sup>3</sup> /h)
Pressure Loss at Maximum Continuous Flow	0.5 psi (0.03 bar)	0.5 psi (0.03 bar)
Maximum Operating Pressure	150 psi (10 bar)	150 psi (10 bar)
Maximum Operating Temperature	120° F (49° C)	120° F (49° C)

## MATERIALS

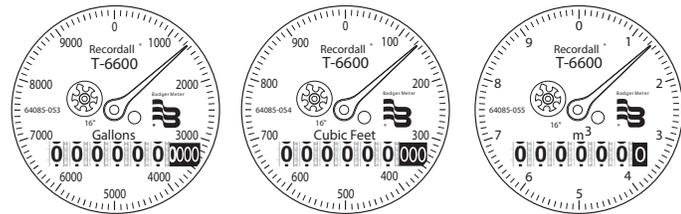
Meter Housing	Blue epoxy-coated cast iron
Turbo Head	Cast iron
Nose Cone & Straightening Vanes	Thermoplastic
Rotor	Thermoplastic
Rotor Radial Bearings	Lubricated thermoplastic
Rotor Thruster Bearing	Sapphire jewels
Rotor Bearing Pivots	Passivated 316 stainless steel
Calibration Mechanism	Stainless steel & thermoplastic
Magnet	Ceramic
Register Housing & Cover	Thermoplastic or bronze
Trim	Stainless steel

## REGISTERS / ENCODERS

### Standard—Sweep-Hand Registration

The standard register is a straight-reading, permanently sealed magnetic drive register. Dirt, moisture, tampering and lens fogging problems are eliminated. The register has a six-odometer wheel totalization display, 360° test circle with center sweep hand, and flow finder to detect leaks. Register gearing is made of self-lubricating engineered polymer, which minimizes friction and provides long life. The multi-position register simplifies meter installation and reading. The high-flow register capacity for the 16" and 20" meters is 10,000,000,000 gallons (1,000,000,000 ft<sup>3</sup>, 10,000,000 m<sup>3</sup>).

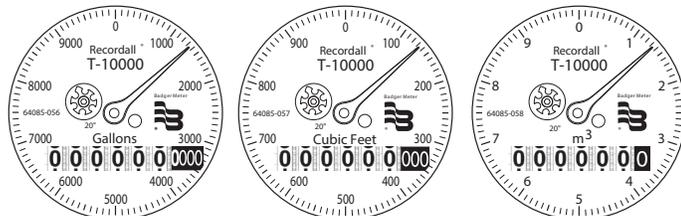
### 16" Meter



#### Sweep Hand Revolution

Meter Model	Gallon	Cubic Feet	Cubic Meter
6600	10,000,000	1000	10

### 20" Meter



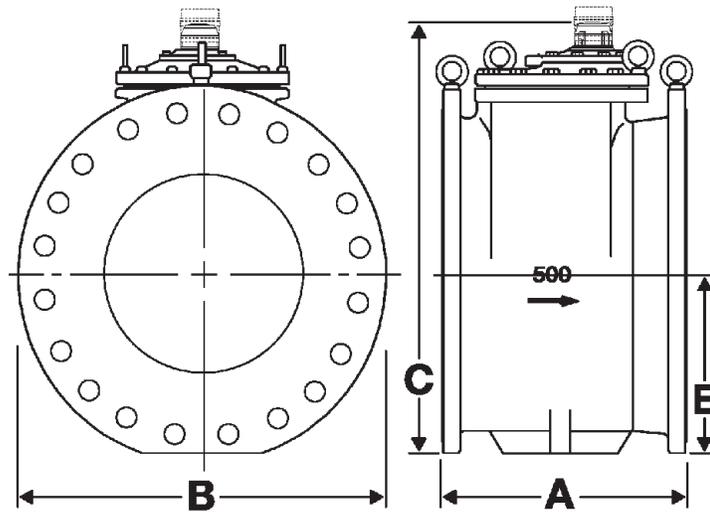
#### Sweep Hand Revolution

Meter Model	Gallon	Cubic Feet	Cubic Meter
10000	10,000,000	1000	10

### Optional—Encoders for AMR/AMI Reading Solutions

AMR/AMI solutions are available for all Recordall Disc Series meters. All reading options can be removed from the meter without disrupting water service. Badger Meter encoders provide years of reliable, accurate readings for a variety of applications and are also available pre-wired to Badger Meter approved AMR/AMI solutions. See details at [www.badgermeter.com](http://www.badgermeter.com).

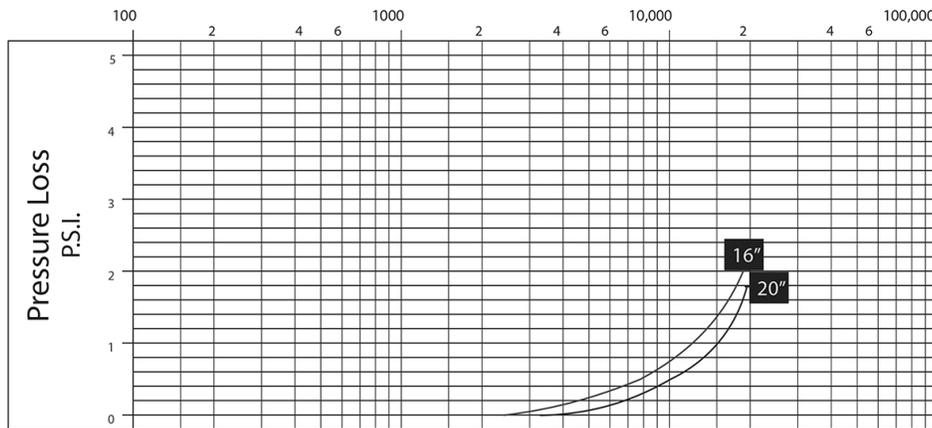
**PHYSICAL DIMENSIONS**



Turbo Series Model	6600	10000
Meter & Pipe Size	16" (400 mm)	20" (500 mm)
Net Weight	412 lb (187 kg)	565 lb (256 kg)
Shipping Weight	462 lb (209 kg)	615 lb (279 kg)
Number of Bolts	16	20
Length (A)	19-11/16" (500 mm)	19-11/16" (500 mm)
Width (B)	22-13/16" (580 mm)	28-1/8" (715 mm)
Height (C)	26-5/16" (668 mm)	30-13/16" (783 mm)
Bolt Circle	21-1/4" (540 mm)	25" (635 mm)
Centerline (E)	11-7/16" (290 mm)	14-1/16" (357 mm)

**PRESSURE LOSS CHART**

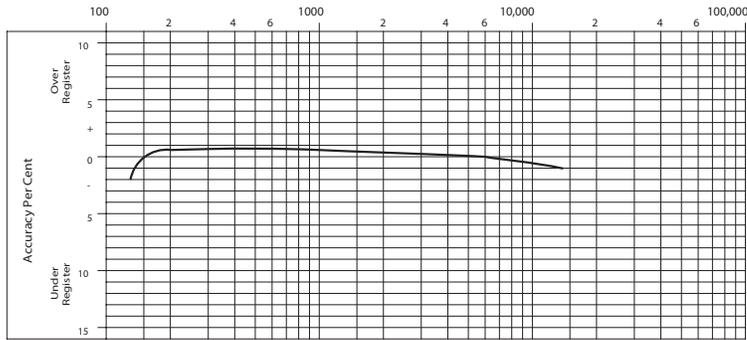
Rate of flow in gallons per minute (gpm)



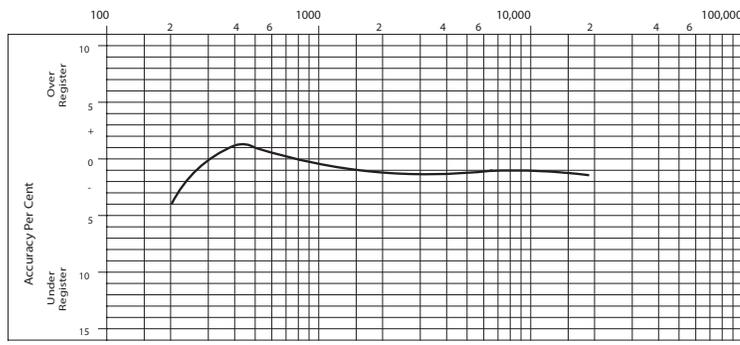
## ACCURACY CHARTS

Rate of flow in gallons per minute (gpm)

### 16" Meter



### 20" Meter



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[www.badgermeter.com](http://www.badgermeter.com)

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