

# Series “W” Turbo Meters

Model W-5500 DR

## Bronze Magnetic Drive Flanged Ends Size 10” (DN 250mm)

### DESCRIPTION

**Model:** W-5500 DR Turbo Meter is based on the turbine principle of measurement; its operating range is from 55 to 5500 gallons per minute (12.5 to 1250 m<sup>3</sup>/h) with registration accuracy of 100% ±1.5% of actual throughput.

**Conformance to Standards:** Sensus Turbo Meters comply with ANSI/AWWA Standard C701 (most recent revision). Each meter is performance tested to insure compliance.

**Performance:** The meter’s unique principle of measurement assures extended accuracy life. The W-5500 DR has no restrictions as to sustained flow rates within its operating range. The design permits continuous operation up to its rated maximum flow capacity, without affecting long term accuracy or causing undue wear.

**Construction:** The meter consists of two basic assemblies— the maincase and the measuring chamber. Straightening vanes in the maincase minimize the swirl upstream of the meter so as to direct the flow evenly to the rotor. The measuring chamber assembly includes the rotor, adjusting vane (for calibration) and sealed Direct Reading (DR) register.

**Magnetic Drive:** The Right Angle Magnetic Drive eliminates conventional worm or miter gears normally required for horizontally mounted rotors or turbine measuring elements. Registration is accomplished by combining the magnetic actions of a driver magnet (embedded in the rear face of the rotor), a three-legged flux carrier and a cylindrical follower magnet attached to the gear train shaft inside the register’s magnet well. Water flowing through the meter causes the rotor (with magnet) to turn; as one of the magnet poles passes one of the flux carrier legs, the magnetic force is transmitted through the flux carrier leg to the follower magnet, causing the register shaft to rotate. The only moving part in water is the rotor assembly.

**Rotor:** The thermoplastic rotor with graphite bearing rotates on a chrome plated stainless steel shaft. The rotor assembly is virtually weightless in water, thus adding to bearing life.

**Maintenance:** The measuring chamber and straightening vanes can be removed, repaired and/or replaced without disturbing the maincase in the line. A spare chamber can be utilized in the event maintenance is required. Cover plates are also available to keep the line in service while the measuring chamber is repaired and recalibrated. Factory testing, repair and measuring chamber exchange programs are available.

**Strainer:** The meter comes equipped with an AWWA type strainer and must be installed immediately upstream of the meter. Sensus recommends the use of an approved strainer with this meter.



W-5500 DR Turbo Meter with AWWA Strainer

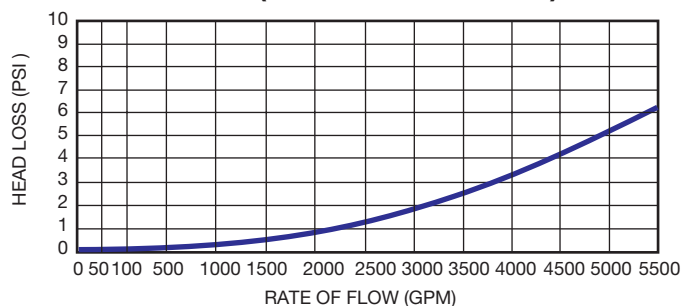


Intelligent Communications Encoder (ICE) Register

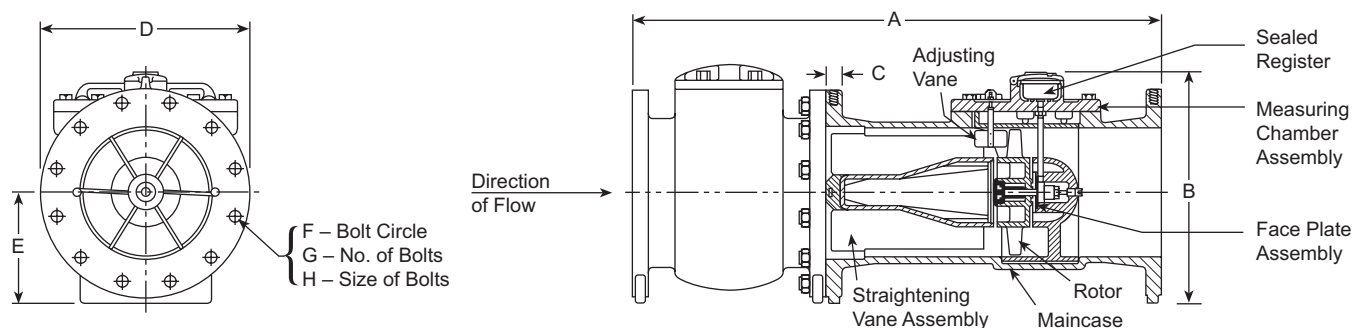
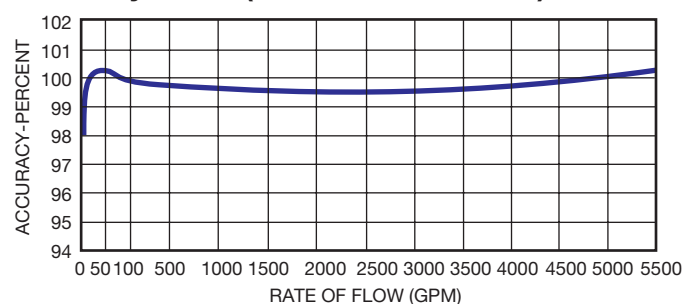
**AMR / AMI Systems:** Meters and encoders are compatible with current Sensus AMR/AMI systems.

**Guarantee:** Sensus Turbo Meters are backed by “The Sensus Guarantee.” Ask your Sensus representative for details or see Bulletin G-500.

### Head Loss Curve (With AWWA Strainer)



### Accuracy Curve (With AWWA Strainer)



## DIMENSIONS AND NET WEIGHTS

Meter and Pipe Size	Normal Operating Range	Connections	A	B	C	D	E	F	G	H	Net Weight	Shipping Weight
10"	55 gpm 5500 gpm <sup>1</sup>	Flanged	41-1/8"	19"	11/16"	16"	8-1/2"	14-1/4"	12	7/8"	590 lbs.	650 lbs.
DN 250mm	12.5 m <sup>3</sup> /hr 1250 m <sup>3</sup> /hr		1045mm	485mm	17mm	406mm	216mm	362mm	12	22mm	268 kg	294 kg

<sup>1</sup> For continuous flows; 7000 GPM (1600m<sup>3</sup>/h) maximum for intermittent flows.

## SPECIFICATIONS

<b>SERVICE</b>	Measurement of potable cold water with flow in one direction only.
<b>OPERATING RANGE</b>	Continuous Flows: 55 to 5500 gpm (12.5 to 1250 m <sup>3</sup> /h) Intermittent Flows: 7000 gpm max. (1600 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ±1.5% of actual throughput
<b>LOW FLOW</b>	95% at 35 gpm (8 m <sup>3</sup> /h)
<b>PRESSURE LOSS</b>	Meter and Strainer—6.2 psi at 5500 gpm (.4 bar at 1250 m <sup>3</sup> /h)
<b>MAXIMUM CONTINUOUS OPERATION</b>	150 psi (10.0 bar)
<b>FLANGE</b>	10" U.S. ANSI B 16.1 Class 125. Optional drillings, if specified, British Standard B.S. 10 or metric standard ISO R2084
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.

<b>METER REGISTRATION</b>	1,000,000,000 gallons 1,000 gallons/sweep hand revolution 100,000,000 cubic feet 100 cubic feet/sweep hand revolution 10,000,000 m <sup>3</sup> 10 m <sup>3</sup> /sweep hand revolution
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<b>MATERIALS</b>	Maincase—Bronze Measuring Chamber—Bronze Straightening Vanes—Stainless Steel Rotor—Thermoplastic Radial Bearing—Ceramic Trim—Stainless Steel Thrust Bearings—Tungsten Carbide Magnets—Ceramic
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<b>STRAINER MATERIALS</b>	Body and Cover—Ductile Iron Screen—Bronze
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