

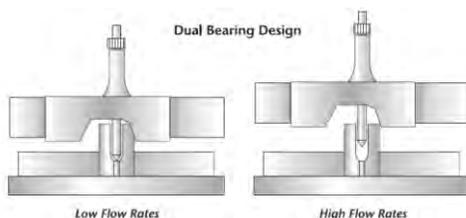
### APPLICATIONS

The Spectrum Single-Jet Meter is the widest ranged, single-measuring element meter available to U.S. utilities. The operation of the single jet element allows the meter to be applied in the vast majority of potable cold water, small commercial applications. These meters are designed with a very high range, including low flow performance equaling or exceeded all other metering technologies. Coupled with the advanced innov8 registers, the Spectrum single-jets are the meter of choice for your revenue assurance and water loss programs.

All Spectrum Model-D meters are top-loading, chamber designs which allow for field maintenance and repairs.

### OPERATIONS

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides the support at high flow rates. This unique “dual bearing” design provides unparalleled accuracy and durability at both high and low flows.



To maintain accuracy, the meter must be installed horizontally ( $\pm 10^\circ$ ) in the direction of water flow. The Spectrum 88DL and 88 DLT come with an integral test port on the outlet. Although regular maintenance is not required, the Spectrum Model D meters have a top-loading measurement chamber for simple access without removing the meter from service. The chamber is bolted to the meter body and secured with a tamper seal.

All Spectrum Model D meters utilize innov8 registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple cellular, AMR, AMI and SCADA outputs. All registers are attached with a robust tamper-resistant housing.



### DESIGN FEATURES

- High accuracy below AWWA standards
- Wide range—1000:1 turndown
- Superior low flow registration
- Compact and light
- Convenient options for various lengths and connections
- Low pressure drop
- No regular maintenance
- Excellent performance in adverse water conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements – upstream or downstream
- No strainer requirement
- 5-year flange-to-flange warranty
- 20-year warranty on meter body
- Compatible with all innov8 registers and associated AMR/AMI capabilities.

### MATERIALS

All Spectrum Model-D meters are designed and manufactured to meet or exceed AWWA C712 standard design and performance specifications. All Models are maintained with NSF-61G lead-free certifications.

### STANDARDS

AWWA C712 – Single-Jet Meters

NSF-61G – Drinking Water System Components Health Effects

**MECHANICAL SPECIFICATIONS**

<b>Spectrum 88DL</b>	<u>1.5-inch (40mm)</u>
Flanges	Oval 2-bolt
Lay Length	13" (330 mm)
Dimensions	See drawing
Weight	9.95lb (4.5 kg)
Test Plug	1" Integral
Test Port	Integral 1" NPT threads
<b>Spectrum 88DLT</b>	<u>1.5-inch (40mm)</u>
Connection	Female 1.5" / 11.5 NPT internal threads
Lay Length	12.625" (319 mm)
Dimensions	See drawing
Weight	8.15lb (3.69 kg)
<b>Spectrum 130D</b>	<u>2-inch (50mm)</u>
Flanges	Oval 2-bolt
Lay Length	9.75" (300 mm)
Dimensions	See drawing
Weight	13lb (5.8 kg)
Test Plug	Available on spool
Brass Spacer Spools*	Lead-free flanged spools for 15.25" and 17" LL

\* Contact Metron for information on brass spools and couplers.

**MATERIALS**

Body & Top-plate:	ASTM C875 - Lead Free Bronze
Impeller:	Polypropylene
Impeller Bearings:	Nylon with Carbon Fiber
Impeller Shaft:	AISI 303, Tungsten Carbide tip
Register Housing:	Thermoplastic

**TAMPER FEATURES**

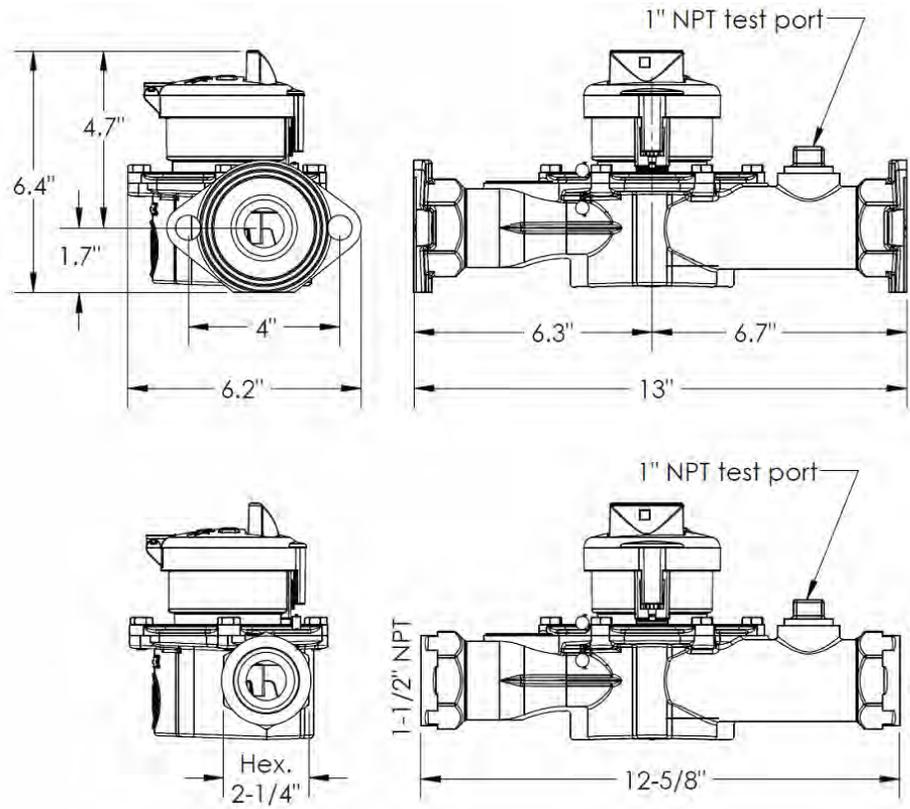
Meter Body	Wire +Lead seal between meter body and top-plate
Register	Tamper-resistant screw

**MARKINGS**

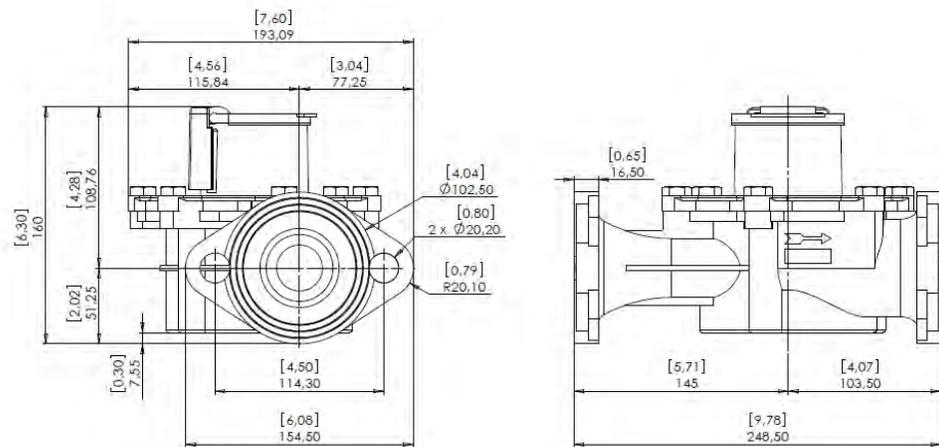
Engraved on Meter Body:	Model
	Serial Number
	Date of Manufacture
	NSF-6
	Direction of Flow

**DIMENSIONS**

**Spectrum 88DL  
1.5-Inch Models**



**Spectrum 130D  
2-Inch Model**



**FLOW & PRESSURE SPECIFICATIONS**

**Spectrum 88DL / 88DLT– 1.5” Models**

Operating Range (98.5 to 101.5%)	0.5 to 105 gpm	(0.11 to 24 m3/hr)
Low Flow (95% min)	0.25 gpm	(0.057 m3/hr)
Max Continuous Flow <sup>1</sup>	88 gpm	(20 m3/hr)
Max Intermittent Flow <sup>2</sup>	105 gpm	(24 m3/hr)
Pressure Loss at Max Continuous	7.25 psi	(0.5 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

**Spectrum 130D – 2” Model**

Operating Range (98.5 to 101.5%)	0.75 to 165 gpm	(0.17 to 37.5 m3/hr)
Low Flow (95% min)	0.25 gpm	(0.057 m3/hr)
Max Continuous Flow <sup>1</sup>	130 gpm	(29.5 m3/hr)
Max Intermittent Flow <sup>2</sup>	165 gpm	(37.5 m3/hr)
Pressure Loss at Max Continuous	7.25 psi	(0.5 bar)
Max Operating Pressure	230 psi	(15.9 kPa)
Max Operating Temperature	120 °F	(48.9 °C)

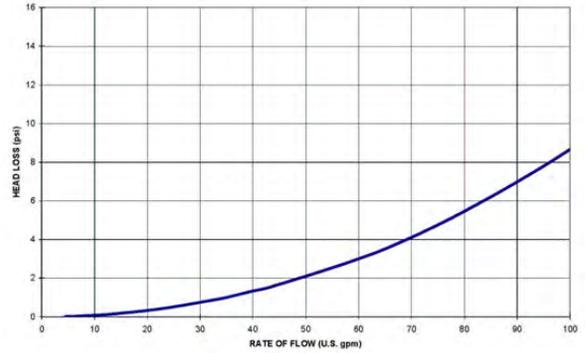
**Notes**

- 1 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
- 2 Max Intermittent defined as flow rate which can be maintained 1 hr/day average

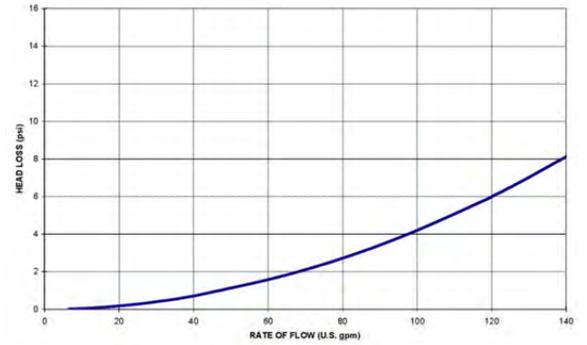
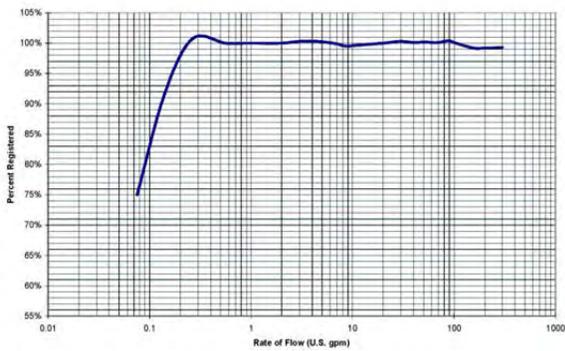
FLOW ACCURACY

PRESSURE DROP

Spectrum 88DL / 88 DLT

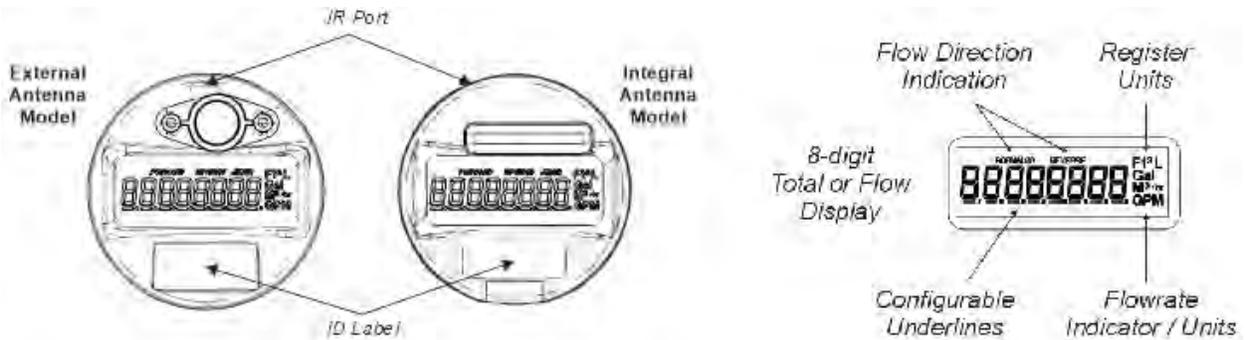


Spectrum 130D



**REGISTERS**

The innov8 electronic register is the water industry’s new standard for register performance. The innov8 offers maximum resolution, a multitude of standard features, on-board datalogging and a variety of cellular, AMI, AMR and SCADA output options. The innov8 is designed for all environments and incorporates the largest battery available for utility applications. The innov8 can be deployed on any Metron Spectrum or Enduro Model D water meter.



<p><b>USG Configuration</b> 1 Gallon Resolution</p>	<p>USG - Commercial Meters (x1) 00000000 Gal</p>	<p>USG Flowrate - All Meters (x0.01) FORWARD 00000000 GPM</p>
<p><b>Ft3 Configuration</b> 0.1 Ft<sup>3</sup> Resolution</p>	<p>Ft3 - Commercial Meters (x0.1) 00000000 Ft<sup>3</sup></p>	<p>Ft3 Flowrate - All Meters (x0.01) FORWARD 00000000 GPM</p>
<p><b>m3 Configuration</b> 0.01 m<sup>3</sup> Resolution</p>	<p>m3 - Commercial Meters (x0.01) 00000000 M<sup>3</sup></p>	<p>m3 Flowrate - All Meters (x0.001) FORWARD 00000000 M<sup>3</sup>/hr</p>

**WARRANTY**

Please contact your Metron representative for formal warranty certificates.

**LEGAL**

Due to updated regulations and product improvements, Metron-Farnier reserves the right to change the product specifications without notice.

DS version Apr-2020A