

### APPLICATIONS

The Spectrum Single-Jet Meter is the widest range, single measuring element meter available to U.S. utilities. The Spectrum residential meters are designed for extremely wide range and long-term accuracy. The single-jet technology is highly impervious to dirt, sand or grit in the water system. The combination of design simplicity, superior grade materials, and high quality manufacturing standards allows for years of virtually new meter performance with no maintenance.

The Spectrum residential meters are available in composite (reinforced plastic) and lead-free bronze models across all common residential sizes.

Coupled with the advanced innov8 registers, the Spectrum single-jets are the meter of choice for your revenue assurance and water loss programs.

### 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.



@ low flow



@ high flow

To maintain accuracy, the meter must be installed horizontally ( $\pm 10^\circ$ ) in the direction of water flow.

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 – exceeding high and low range of AWWA residential standards
- Starting flow below 1/16 gpm
- Excellent performance in adverse water conditions
- Advanced materials for long-term durability
- Unaffected by sand or small debris in line
- No straight pipe requirements upstream or downstream of meter
- High resistance to freezing
- Lightweight, compact design for simple installations
- No strainer requirement
- Compatible with all innov8 registers and associated AMR/AMI capabilities.

### MATERIALS

All residential 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 15D</b>	AWWA 5/8x3/4" (20mm) Short
Construction:	Composite
Threads	1" NPSM
Lay Length	3.9" (99 mm)
<b>Spectrum 25D</b>	AWWA 5/8" (15mm)
Construction:	Composite
Threads	0.75" NPSM
Lay Length	7.5" (190 mm)
<b>Spectrum 30D</b>	AWWA 5/8x3/4" (15x20mm)
Construction:	Composite
Threads	1" NPSM
Lay Length	7.5" (190 mm)
<b>Spectrum 30DB</b>	AWWA 5/8x3/4" (15x20mm)
Construction:	Lead-free brass body + Composite plates
Threads	1" NPSM
Lay Length	7.5" (190 mm)
<b>Spectrum 30DL</b>	AWWA 3/4" (20mm)
Construction:	Composite
Threads	1" NPSM
Lay Length	9.0" (229 mm)
<b>Spectrum 50DL</b>	AWWA 1" (25mm)
Construction:	Lead-free brass
Threads	1.25 NPSM
Lay Length	10.75" (273 mm)

**MATERIALS**

S25/S30Dx models	
Composite Body & Top-plate:	Reinforced Nylon (Polyamide 12)
Brass Body & Top-plate:	EcoBrass™ - Lead Free Brass
Impeller:	Polypropylene
Impeller Bearing:	Nivaflex
Impeller Pivot:	Sapphire
Impeller Shaft:	Tungsten Carbide
S50DL model	
Body:	Low lead Bronze: ASTM C875
Impeller:	Polypropylene
Impeller Bearings:	Tungsten Carbide
Impeller Shaft:	AISI 303, Tungsten Carbide tip
Register Housing:	Thermoplastic

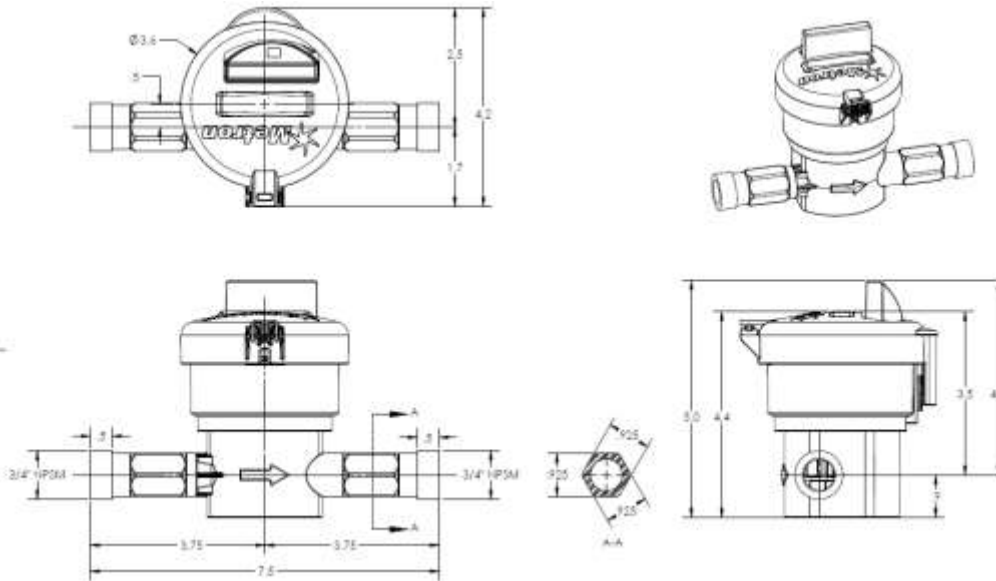
**MARKINGS**

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

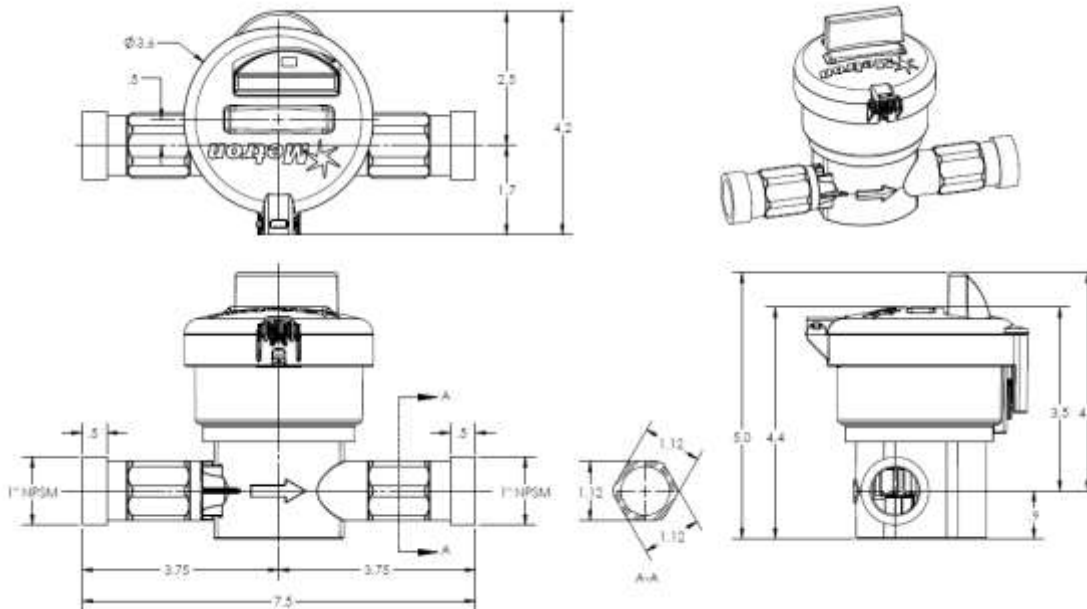
**DIMENSIONS**

**Spectrum 15D – 5/8" Short: Contact Metron**

**Spectrum 25D – 5/8"**

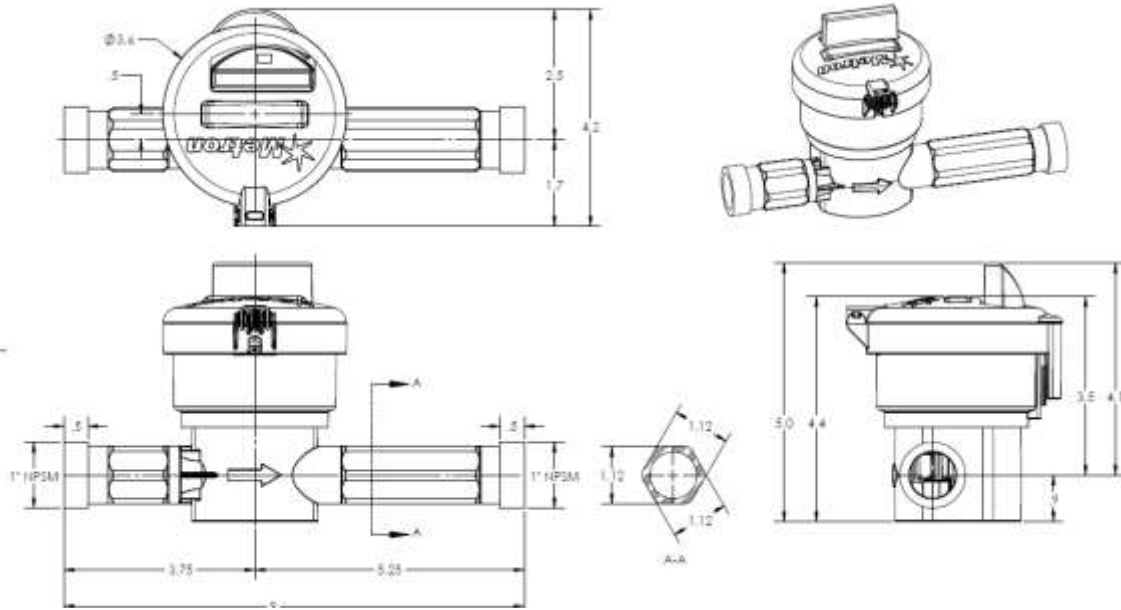


**Spectrum 30D and 30DB– 5/8x3/4"**

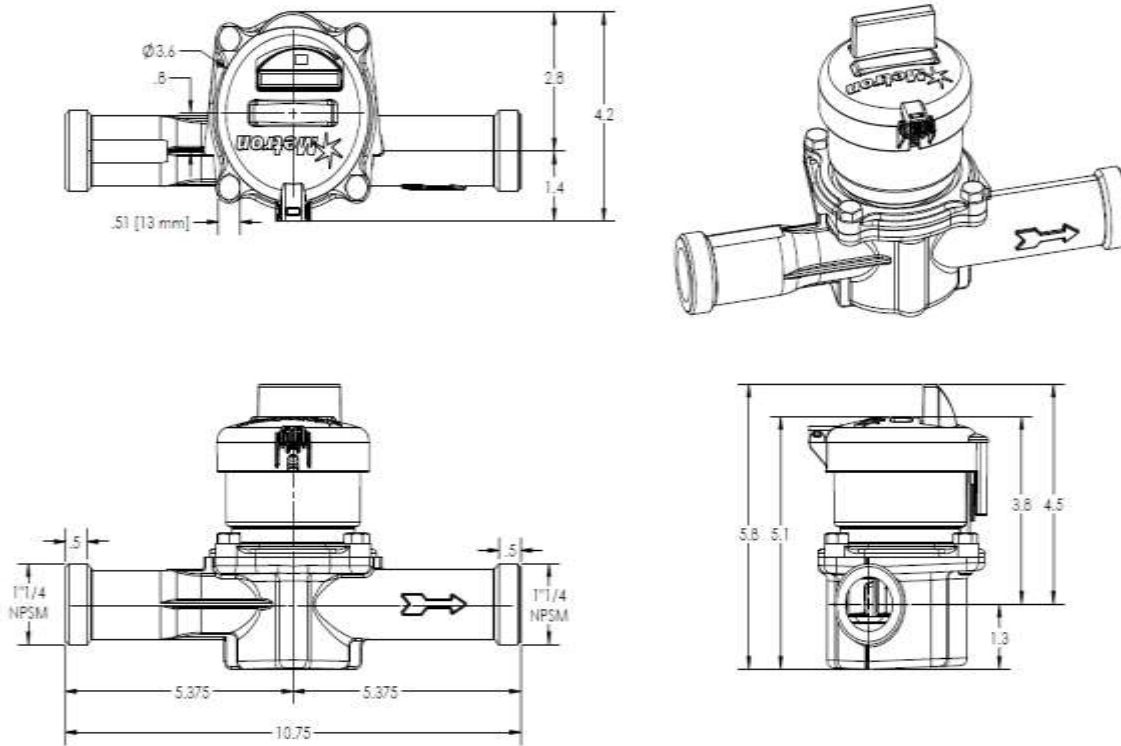


**DIMENSIONS**

**Spectrum 30DL - 3/4"**



**Spectrum 50DL - 1"**



## FLOW &amp; PRESSURE SPECIFICATIONS

**Spectrum 15D – 5/8” Short Model**

Operating Range (98.5 to 101.5%)	0.088 to 15 gpm	(0.02 to 3.4 m3/hr)
Low Flow (95% min)	0.06 gpm	(0.014 m3/hr)
Max Continuous Duty <sup>1</sup>	15 gpm	(3.4 m3/hr)
Max Intermittent <sup>2</sup>	20 gpm	(4.5 m3/hr)
Pressure Loss at Max Continuous	10 psi	(0.69 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)

**Spectrum 25D – 5/8” Model**

Operating Range (98.5 to 101.5%)	0.125 to 20 gpm	(0.028 to 4.5 m3/hr)
Low Flow (95% min)	0.0625 gpm	(0.0142 m3/hr)
Max Continuous Duty <sup>1</sup>	20 gpm	(4.5 m3/hr)
Max Intermittent <sup>2</sup>	30 gpm	(6.8 m3/hr)
Pressure Loss at Max Continuous	22 psi	(1.51 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)

**Spectrum 30D / 30DB – 5/8x3/4” Model**

Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	(0.028 to 6.8 m3/hr)
Low Flow (95% min)	0.0625 gpm	(0.0142 m3/hr)
Max Continuous Duty <sup>1</sup>	30 gpm	(6.8 m3/hr)
Max Intermittent <sup>2</sup>	40 gpm	(9.1 m3/hr)
Pressure Loss at Max Continuous	13 psi	(0.9 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)

**Spectrum 30DL – 3/4” Model**

Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	(0.028 to 6.8 m3/hr)
Low Flow (95% min)	0.0625 gpm	(0.0142 m3/hr)
Max Continuous Duty <sup>1</sup>	30 gpm	(6.8 m3/hr)
Max Intermittent <sup>2</sup>	40 gpm	(9.1 m3/hr)
Pressure Loss at Max Continuous	13 psi	(0.9 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)

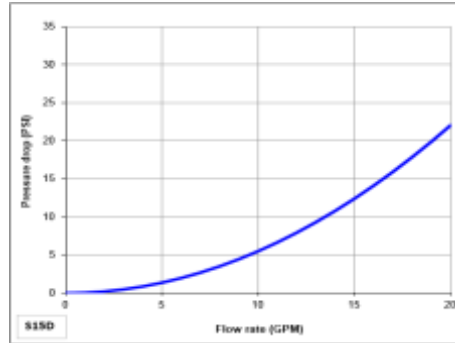
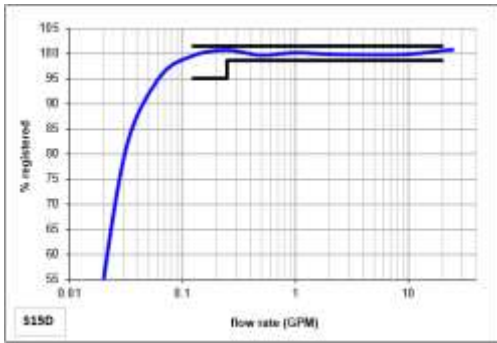
**Spectrum 50DL – 1” Model**

Operating Range (98.5 to 101.5%)	0.5 to 70 gpm	(0.114 to 15.9 m3/hr)
Low Flow (95% min)	0.125 gpm	(0.028 m3/hr)
Max Continuous Duty <sup>1</sup>	50 gpm	(11.4 m3/hr)
Max Intermittent <sup>2</sup>	70 gpm	(15.9 m3/hr)
Pressure Loss at Max Continuous	8.0 psi	(0.55 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)

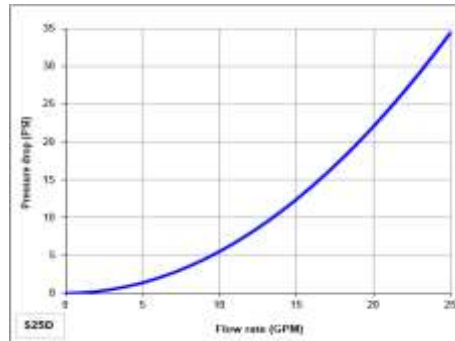
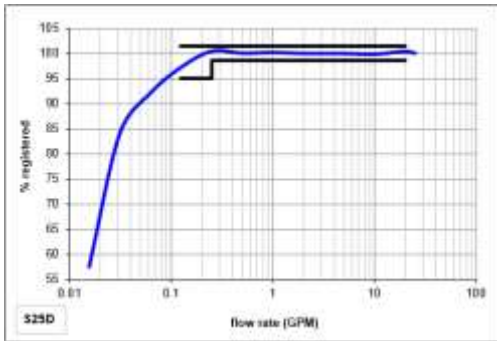
**Notes**

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

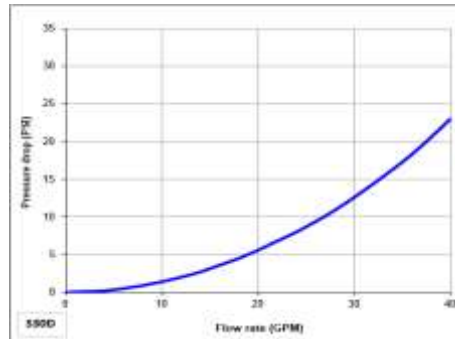
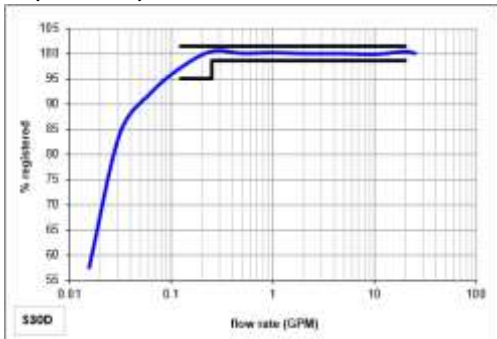
S15D



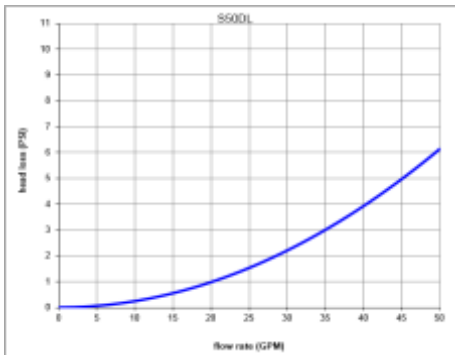
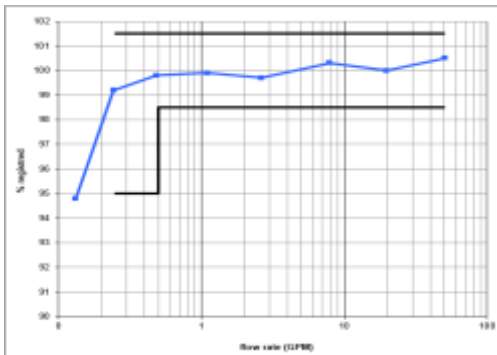
S25D



S30D / S30DB / S30DL

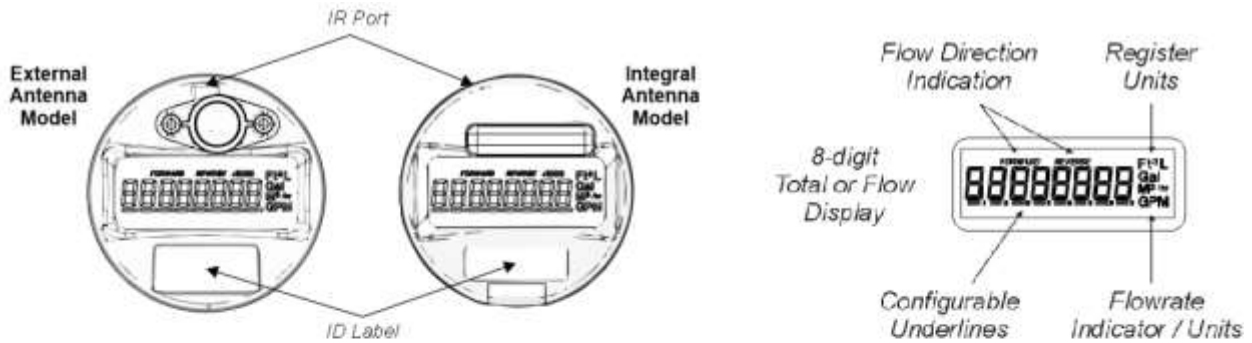


S50DL



**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> 0.1 Gallon Resolution</p>	<p>USG - Residential Meters (x0.1)</p>	<p>USG Flowrate - All Meters (x0.01)</p>
<p><b>Ft3 Configuration</b> 0.01 Ft3 Resolution</p>	<p>Ft3 - Residential Meters (x0.01)</p>	<p>Ft3 Flowrate - All Meters (x0.01)</p>
<p><b>m3 Configuration</b> 0.001 m3 Resolution</p>	<p>m3 - Residential Meters (x0.001)</p>	<p>m3 Flowrate - All Meters (x0.001)</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.

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