

# Residential Spectrum Jet Meters

## Product Datasheet

### Applications

The Spectrum Jet single-jet meter is the widest range single measuring element meter available to North American utilities. Spectrum Jet 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.

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

Coupled with the advanced Prism cellular registers, Spectrum Jet single-jets are the meters 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.

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

All Spectrum Jet Model D meters utilize Prism 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.

### Materials

All residential Spectrum Jet 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



Spectrum Jet 15D,  
25D and 30D



Spectrum Jet 30DL



Spectrum Jet 30DB



Spectrum Jet 50DL



Spectrum Jet  
50DLC

All meters are shown with  
Prism cellular registers  
installed

### 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 Metron Prism registers and associated AMR/AMI capabilities

## Mechanical Specifications

CONSTRUCTION	THREADS	LAY LENGTH
<b>Spectrum Jet 15D - AWWA 5/8 x 1/2" (15mm) Short</b>		
Composite	3/4" NPSM	3.9" (100mm)
<b>Spectrum Jet 25D - AWWA 5/8 x 1/2" (15mm)</b>		
Composite	3/4" NPSM	7.5" (190mm)
<b>Spectrum Jet 30D - AWWA 5/8 x 3/4" (15x20mm)</b>		
Composite	1" NPSM	7.5" (190mm)
<b>Spectrum Jet 30DB - AWWA 5/8 x 3/4" (15x20mm)</b>		
Lead-free brass body + Composite plates	1" NPSM	7.5" (190mm)
<b>Spectrum Jet 30DL - AWWA 3/4 x 3/4" (20mm)</b>		
Composite	1" NPSM	9.0" (230mm)
<b>Spectrum Jet 50DL - AWWA 1" (25mm)</b>		
Lead-free brass	1.25" NPSM	10.75" (273mm)
<b>Spectrum Jet 50DLC - AWWA 1" (25mm)</b>		
Lead-free brass	1.25" NPSM	10.75" (273mm)

## Materials

### Spectrum Jet 25/30Dx Models

Composite Body & Top-plate	Brass Body & Top-plate	Impeller	Impeller Bearing	Impeller Pivot	Impeller Shaft
Reinforced Nylon (Polyamide 12)	EcoBrass™ - Lead Free Brass	Polypropylene	Nivaflex	Sapphire	Tungsten Carbide

### Spectrum Jet 50DL/50DLC Models

Body	Impeller	Impeller Bearings	Impeller Shaft
Low-lead Bronze: ASTM C875	Polypropylene	Tungsten Carbide	AISI 303 Tungsten Carbide Tip

Register Housing: Thermoplastic

## Markings

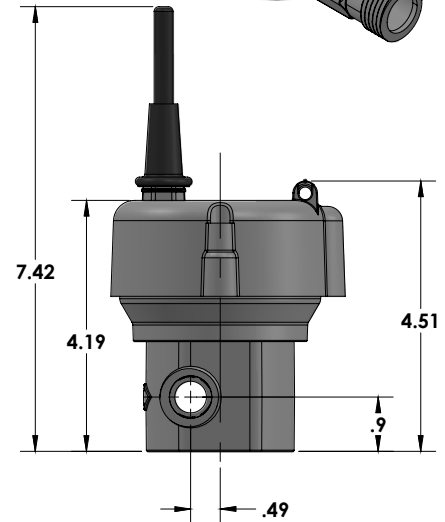
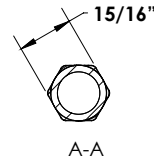
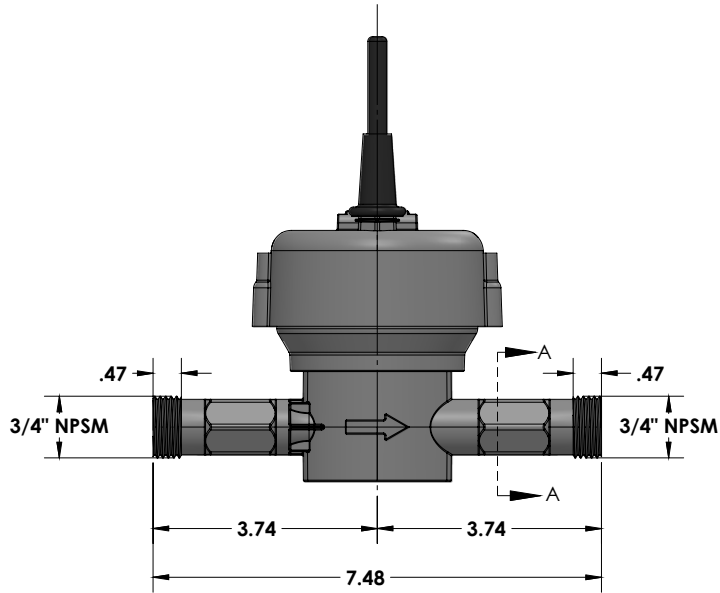
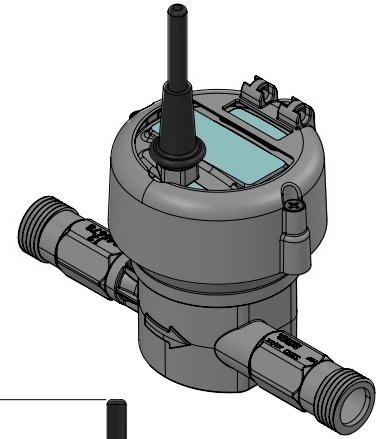
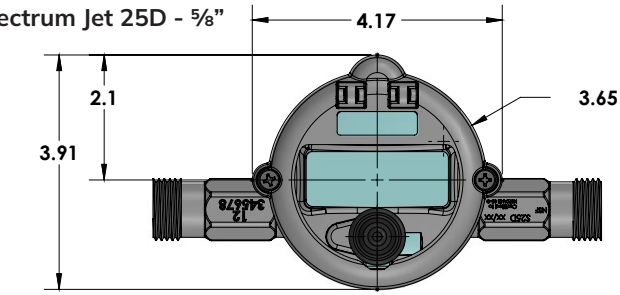
Engraved on Meter Body:

- Model
- Serial Number
- Date of Manufacture
- NSF-6
- Direction of Flow

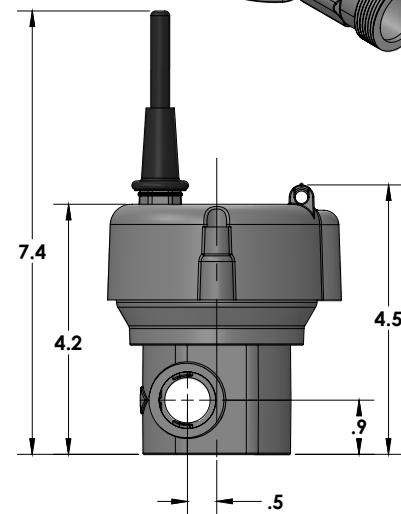
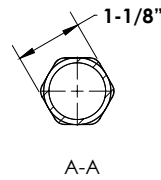
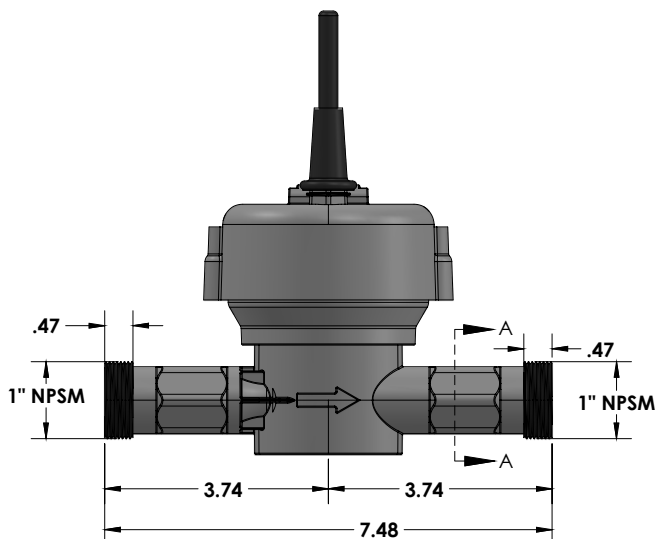
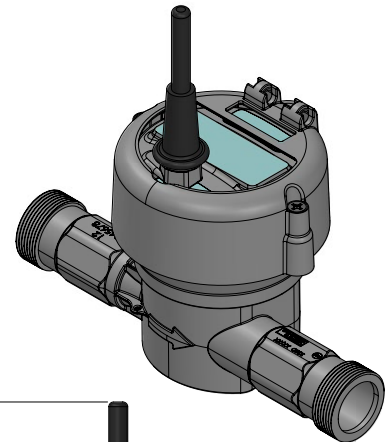
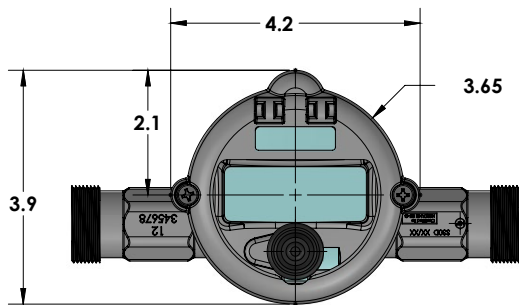
## Dimensions (inches)

Spectrum Jet 15D - 5/8" Short: Contact Metron

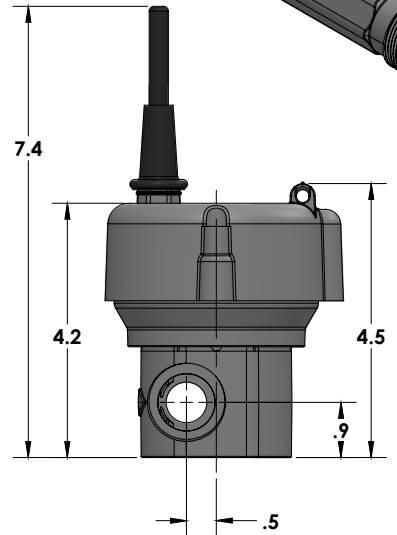
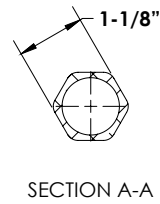
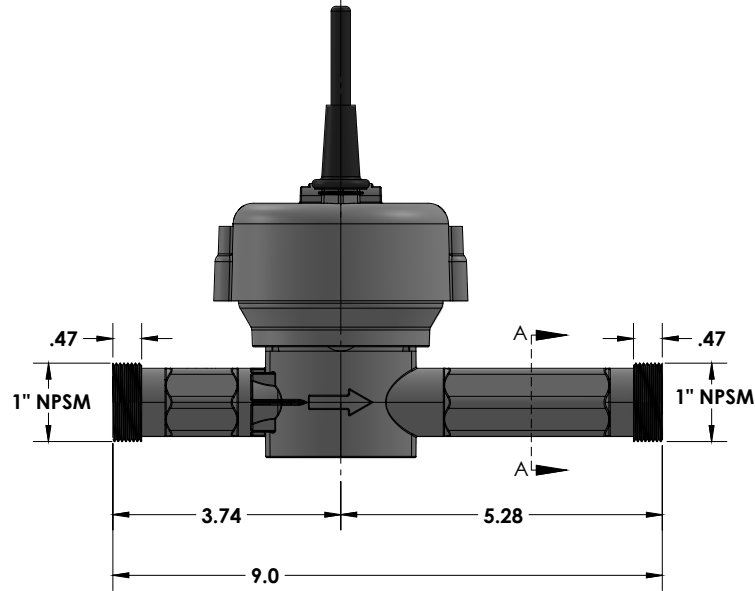
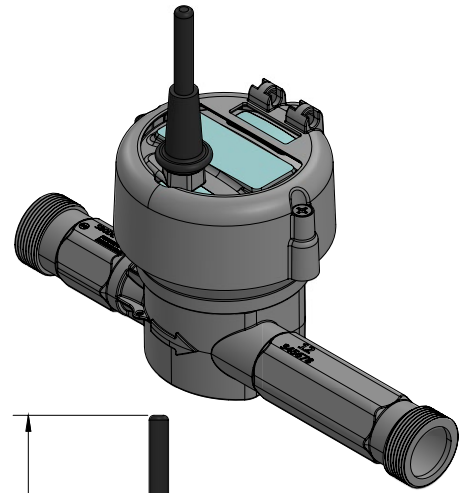
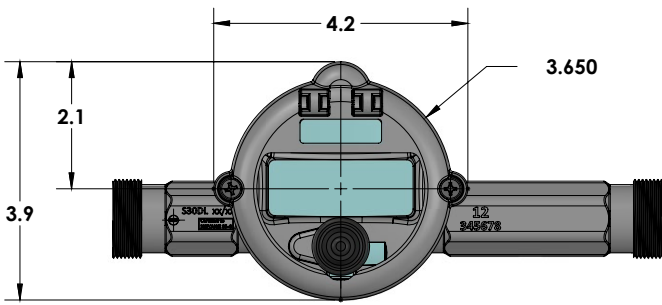
Spectrum Jet 25D - 5/8"



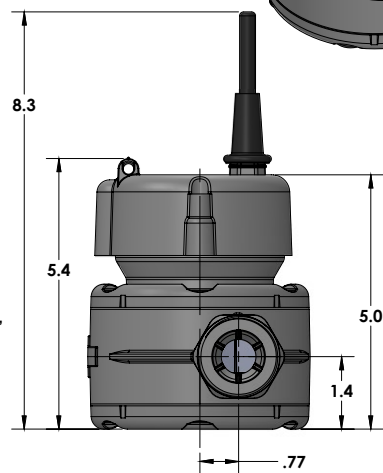
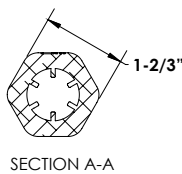
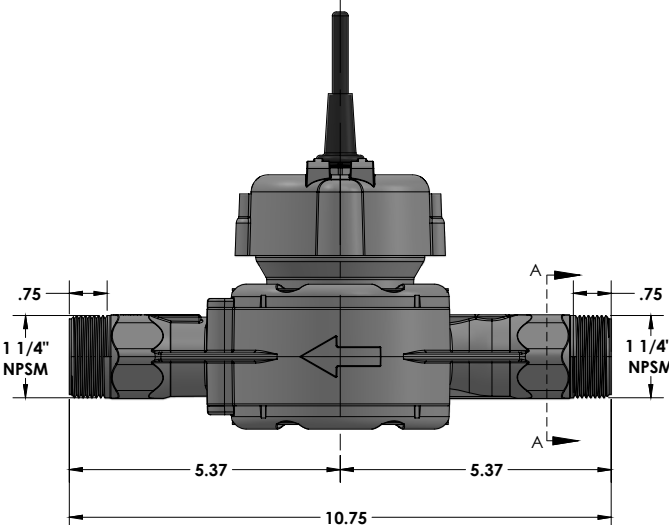
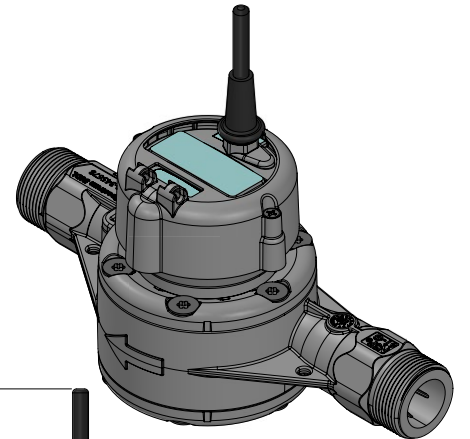
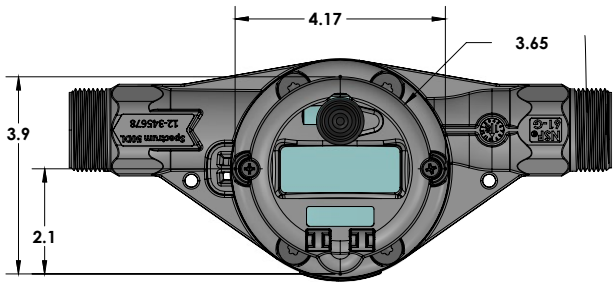
Spectrum Jet 30D and 30DB - 5/8 x 3/4"



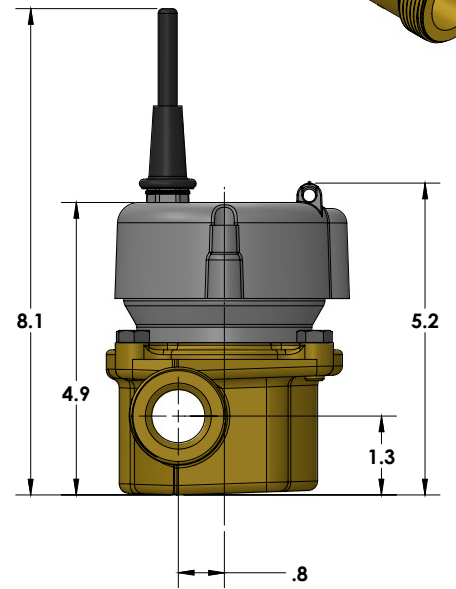
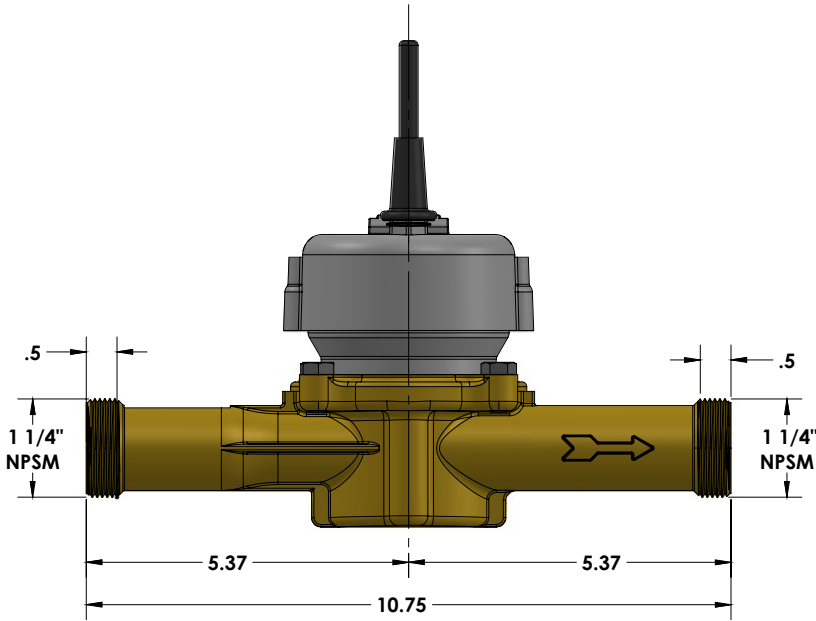
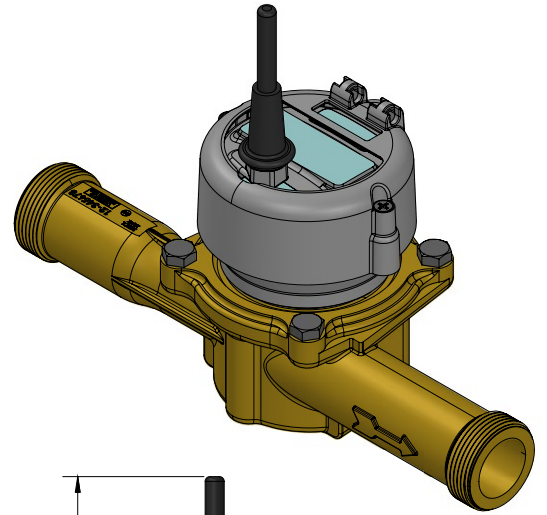
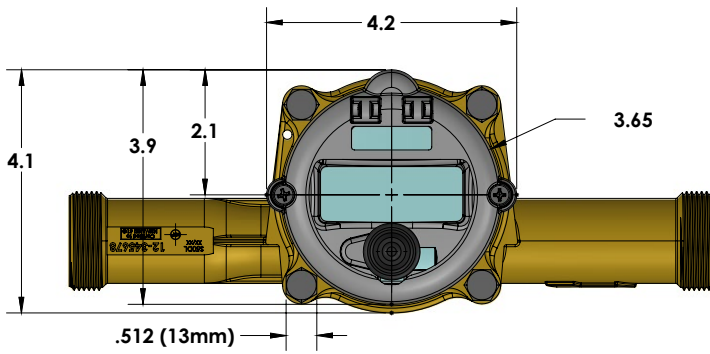
Spectrum Jet 30DL - 3/4"



Spectrum Jet 50DL - 1"



## Spectrum Jet 50DLC - 1"



## Flow & Pressure Specifications

### Spectrum Jet 15D - 5/8 Short Model

Operating Range (98.5 to 101.5%)	0.088 to 15 gpm	0.02 to 3.4 m <sup>3</sup> /hr
Low Flow (95% min)	0.06 gpm	0.014 m <sup>3</sup> /hr
Max Continuous Duty <sup>1</sup>	15 gpm	3.4 m <sup>3</sup> /hr
Max Intermittent <sup>2</sup>	20 gpm	4.5 m <sup>3</sup> /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

### 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

## Flow & Pressure Specifications

### Spectrum Jet 25D - 5/8" Model

Operating Range (98.5 to 101.5%)	0.125 to 20 gpm	0.028 to 4.5 m <sup>3</sup> /hr
Low Flow (95% min)	0.0625 gpm	0.0142 m <sup>3</sup> /hr
Max Continuous Duty <sup>1</sup>	20 gpm	4.5 m <sup>3</sup> /hr
Max Intermittent <sup>2</sup>	30 gpm	6.8 m <sup>3</sup> /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 Jet 30D/30DB - 5/8 x 3/4" Model

Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	0.028 to 6.8 m <sup>3</sup> /hr
Low Flow (95% min)	0.0625 gpm	0.0142 m <sup>3</sup> /hr
Max Continuous Duty <sup>1</sup>	30 gpm	6.8 m <sup>3</sup> /hr
Max Intermittent <sup>2</sup>	40 gpm	9.1 m <sup>3</sup> /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 Jet 30DL - 3/4" Model

Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	0.028 to 6.8 m <sup>3</sup> /hr
Low Flow (95% min)	0.0625 gpm	0.0142 m <sup>3</sup> /hr
Max Continuous Duty <sup>1</sup>	30 gpm	6.8 m <sup>3</sup> /hr
Max Intermittent <sup>2</sup>	40 gpm	9.1 m <sup>3</sup> /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

#### 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

## Flow & Pressure Specifications

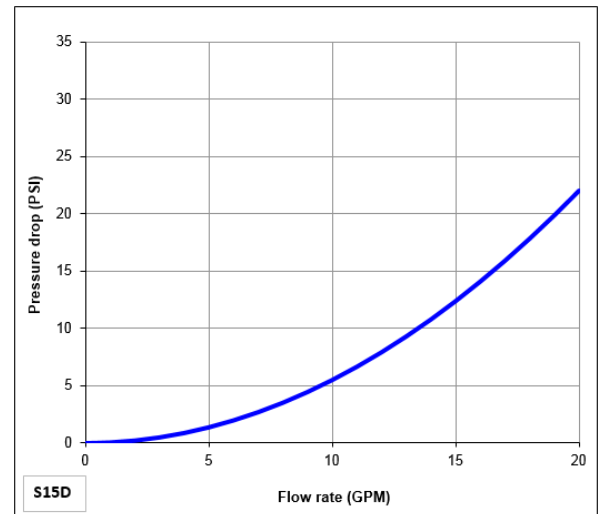
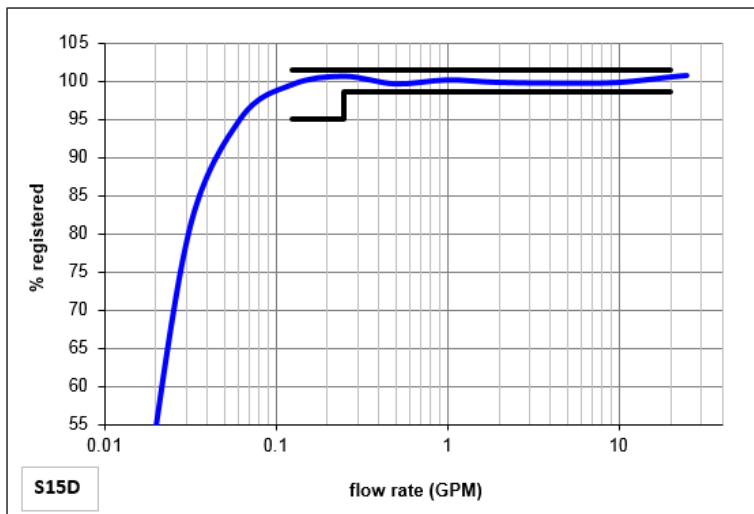
### Spectrum Jet 50DL - 1" Model

Operating Range (98.5 to 101.5%)	0.5 to 70 gpm	0.114 to 15.9 m <sup>3</sup> /hr
Low Flow (95% min)	0.125 gpm	0.028 m <sup>3</sup> /hr
Max Continuous Duty <sup>1</sup>	50 gpm	11.4 m <sup>3</sup> /hr
Max Intermittent <sup>2</sup>	70 gpm	15.9 m <sup>3</sup> /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

### Spectrum Jet 50DLC - 1" Model

Operating Range (98.5 to 101.5%)	0.5 to 70 gpm	0.114 to 15.9 m <sup>3</sup> /hr
Low Flow (95% min)	0.125 gpm	0.028 m <sup>3</sup> /hr
Max Continuous Duty <sup>1</sup>	50 gpm	11.4 m <sup>3</sup> /hr
Max Intermittent <sup>2</sup>	70 gpm	15.9 m <sup>3</sup> /hr
Pressure Loss at Max Continuous	8.0 psi	0.55 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	194° F	90° C

### Spectrum Jet 15D

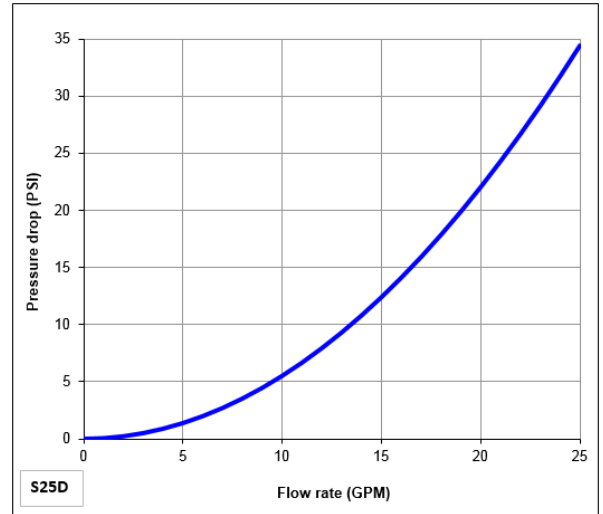
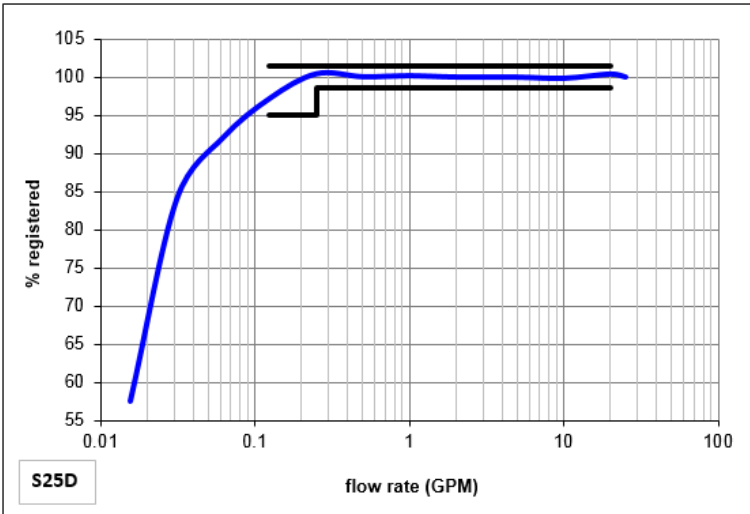


#### Notes:

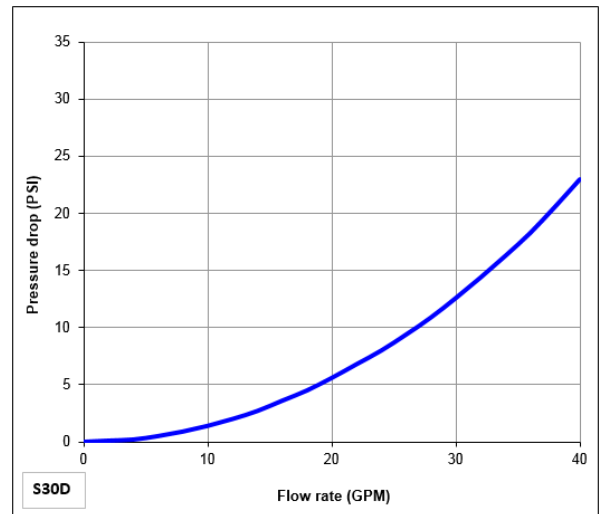
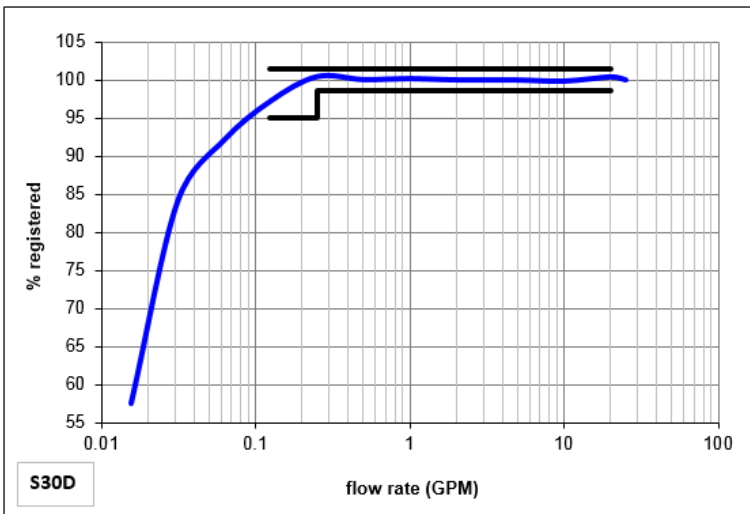
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3. Max Intermittent defined as flow rate which can be maintained 1 hr/day average

# Flow & Pressure Specifications

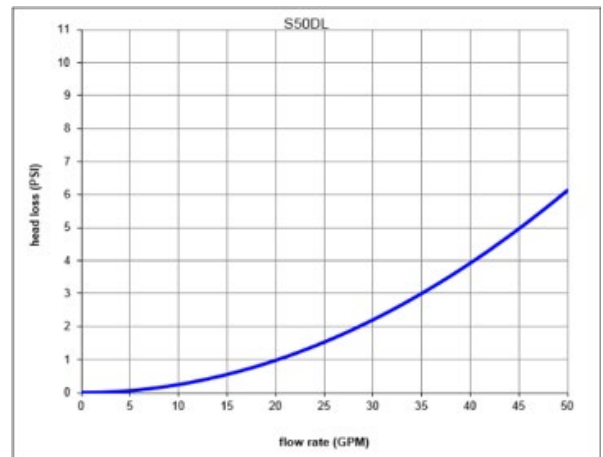
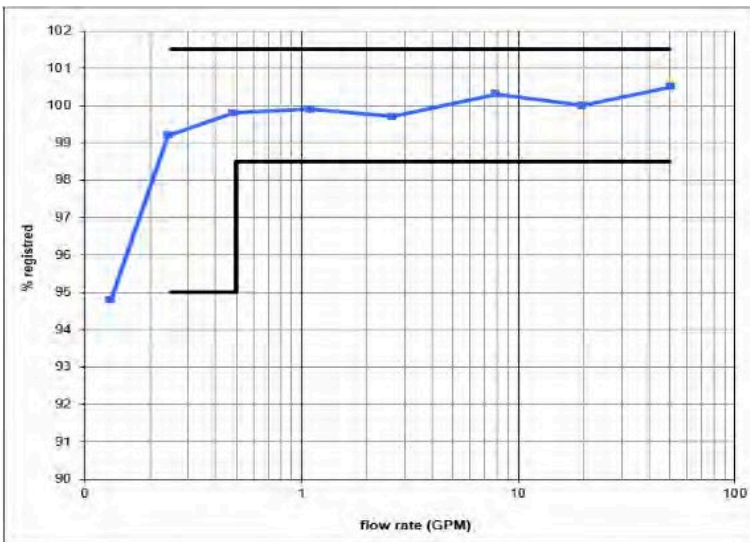
## Spectrum Jet 25D



## Spectrum Jet 30D / 30DB / 30DL



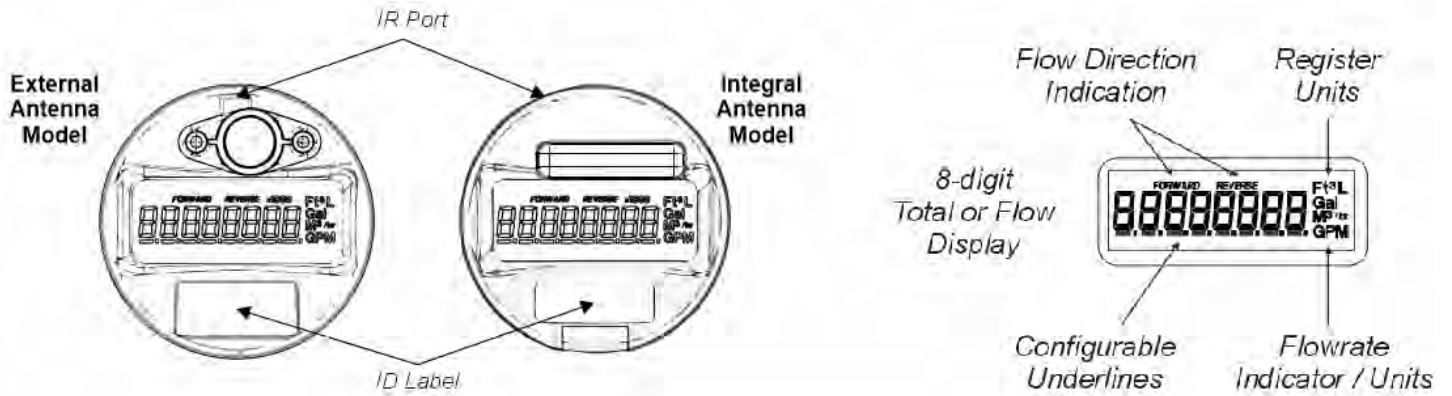
## Spectrum Jet 50DL / 50DLC





## Applications

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



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

## 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.