

Spectrum Enduro FSA Fire Service Assembly

Product Datasheet

Applications

The Spectrum Enduro FSA fire service assembly series consists of Metron's Enduro meters combined with strainers for fire service applications. Strainers are sourced from Watts/Ames.

The Spectrum Enduro 6" and 8" water meters are single element, wide range industrial meters. They utilize a top-loading chamber to insert a small diameter Spectrum Jet meter within the flow stream. This unique system allows for unparalleled accuracy and durability at both high and low flows within a compact meter body.

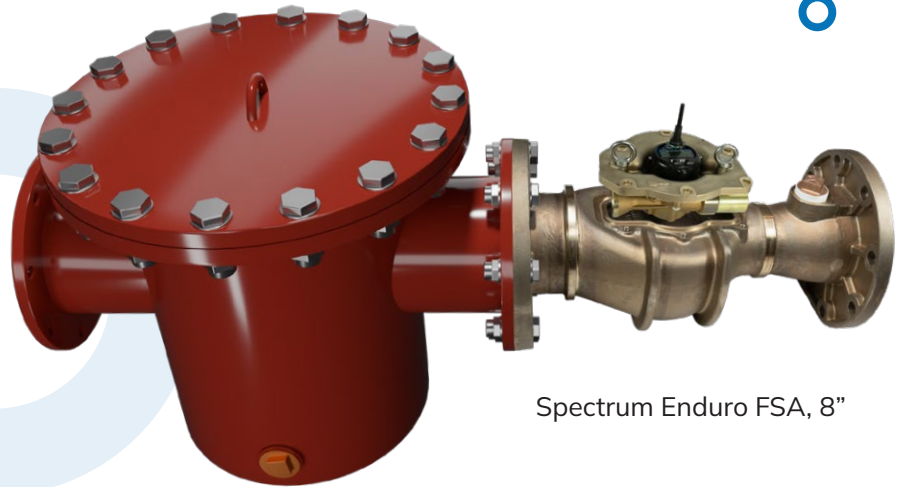
Operations

Water enters the meter passing over an in-line water conditioner that directs the water through a small diameter Spectrum Jet meter that proportionally measures the total water flow. This incoming water rotates a suspended impeller in the measuring chamber. A low friction pivot bearing supports the impeller at low flow rates while an upper thrust bearing provides the support at high flow rates. The impeller has an attached magnet at its top for the register interface.



All bearing materials are fortified for minimal wear during high-flow stress. The impeller shaft utilizes tungsten tips to minimize wear and ensure long-term accuracy. The Spectrum Enduro meters come with integral flanges (either 6" or 8").

To maintain accuracy, the meter must be installed horizontally ($\pm 10^\circ$) in the direction of water flow. Spectrum Enduro meters come with an integral test port on the outlet. Although regular maintenance is not required, the meters have a top-loading measurement chamber for simple access without removing the meter from service.



Spectrum Enduro FSA, 8"

All Spectrum Enduro meters utilize Metron's Prism registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple output options. All registers are attached with a robust tamper-resistant housing.

Design Features

- High accuracy
- Wide range – 1000:1 turndown
- Superior low flow registration
- Minimal pressure loss
- Long-term durability
- Low and high flow models to accommodate variety of industrial applications
- No regular maintenance
- Small, compact design for simple installations
- Excellent performance in adverse conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements upstream or downstream of meter
- Strainers available for FM Fire Service
- 5-year flange-to-flange warranty

Materials

All Spectrum Enduro meters are designed and manufactured to meet or exceed AWWA C712 standards design specifications. They also meet or exceed AWWA C701 standards Class II turbine meter performance.

Standards

AWWA C712 – Single-Jet Meters

NSF-61G – Drinking Water System Components Health Effects

Mechanical Specifications

Spectrum Enduro 2800	6-inch (150mm)	8-inch (200 mm)
Flanges	Round 8-bolt	Round 8-bolt
Lay Length	24" (610 mm)	24" (610 mm)
Dimensions	See drawing	See drawing
Weight	121 lb (54.88 kg)	142 lb (64.4 kg)
Test Port	Integral 2" NPT threads	Integral 2" NPT threads

Spectrum Enduro 3600	6-inch (150mm)	8-inch (200 mm)
Flanges	Round 8-bolt	Round 8-bolt
Lay Length	24" (610 mm)	24" (610 mm)
Dimensions	See drawing	See drawing
Weight	121 lb (54.88 kg)	142 lb (64.4 kg)
Test Port Integral	2" NPT threads Integral	2" NPT threads

Strainers: Fireflow-rated strainers available. Contact Metron for additional information

MATERIALS

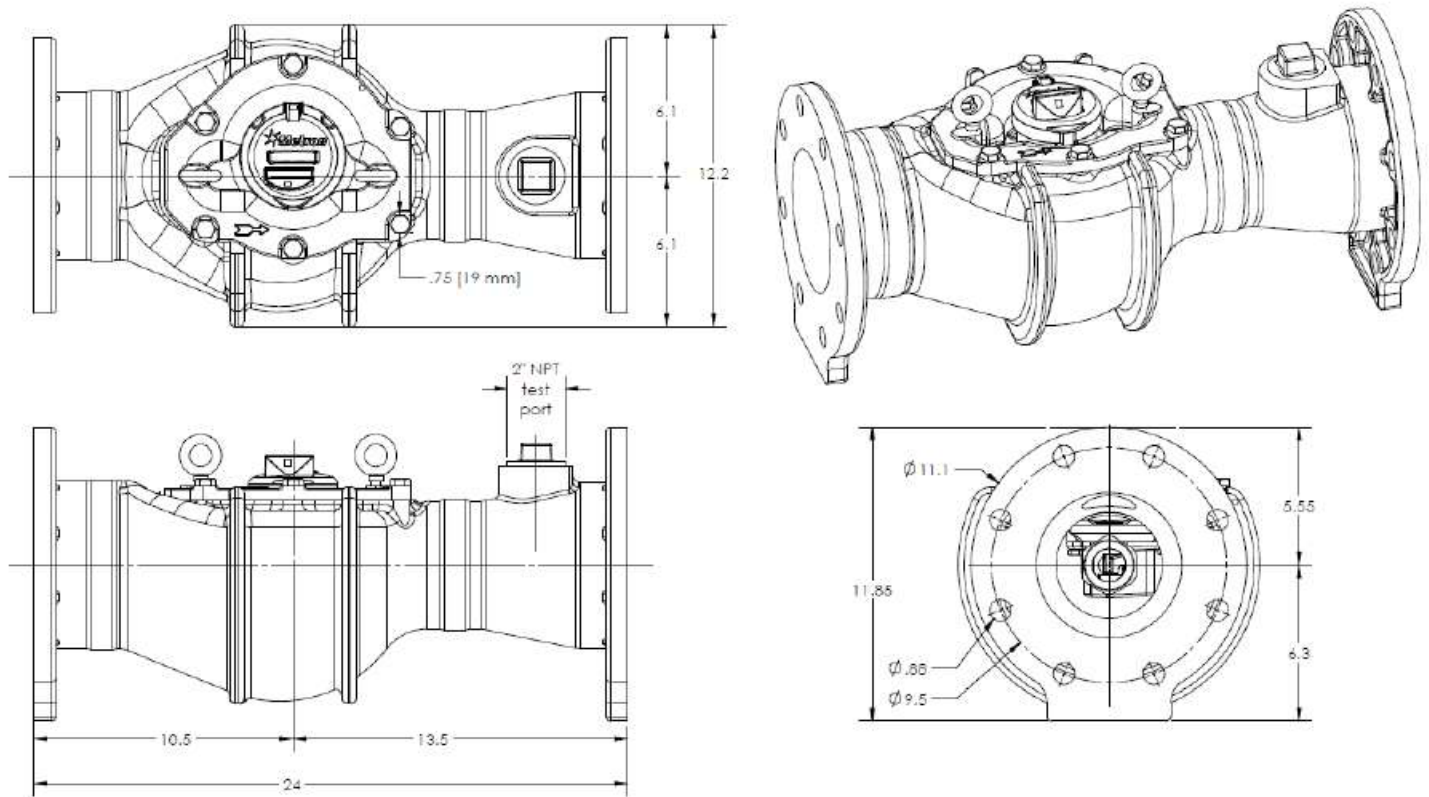
Body & Top-plate:	ASTM C917 - Lead Free Brass
Impeller:	Polypropylene
Impeller Bearings:	Tungsten Carbide
Impeller Shaft:	AISI 303, Nivaflex tip
Register Housing:	Thermoplastic

MARKINGS

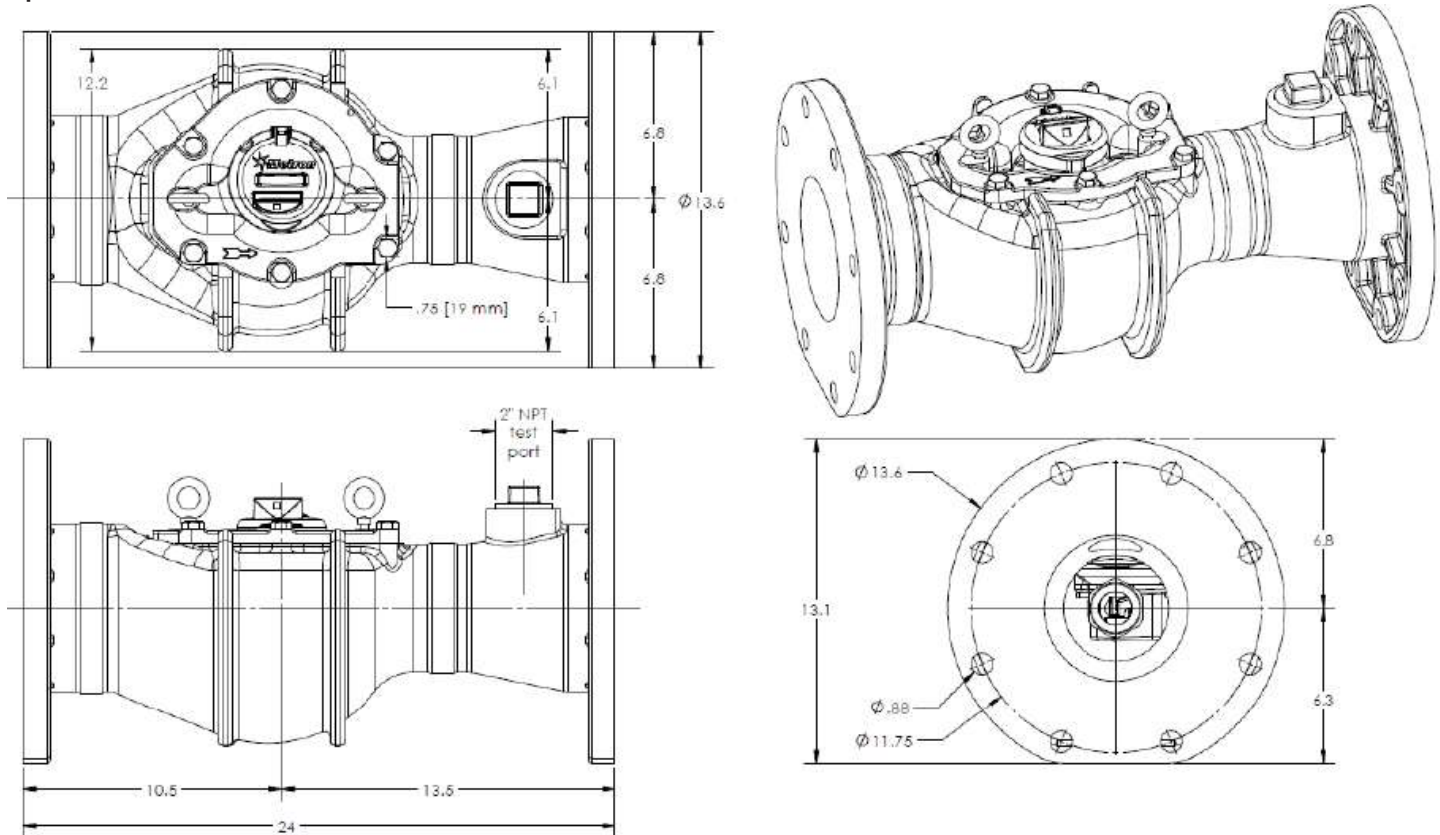
Engraved on meter body: Model, Serial Number, Date of Manufacture, NSF-61G, Direction of Flow arrow

DIMENSIONS

Spectrum Enduro 2800D / 3600D - 6-inch model



Spectrum Enduro 2800D / 3600D - 8-inch model



Flow & Pressure Specifications

Spectrum Enduro 2800D – 6” and 8” Model

Operating Range (98.5 to 101.5%)	6 to 2800 gpm	(1.38 to 636 m3/hr)
Low Flow (95% min)	4.4 gpm	(1 m3/hr)
Max Continuous Flow ²	2400 gpm	(545 m3/hr)
Max Intermittent Flow ³	2800 gpm	(636 m3/hr)
Pressure Loss at Max Continuous	6.40 psi	(0.44 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Spectrum Enduro 3600D – 6” and 8” Model

Operating Range (98.5 to 101.5%)	14 to 3600 gpm	(3.2 to 818 m3/hr)
Low Flow (95% min)	8 gpm	(1.82 m3/hr)
Max Continuous Flow ²	2800 gpm	(636 m3/hr)
Max Intermittent Flow ³	3600 gpm	(818 m3/hr)
Pressure Loss at Max Continuous	11 psi	(0.76 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Notes

1 Starting flow rate for reference only

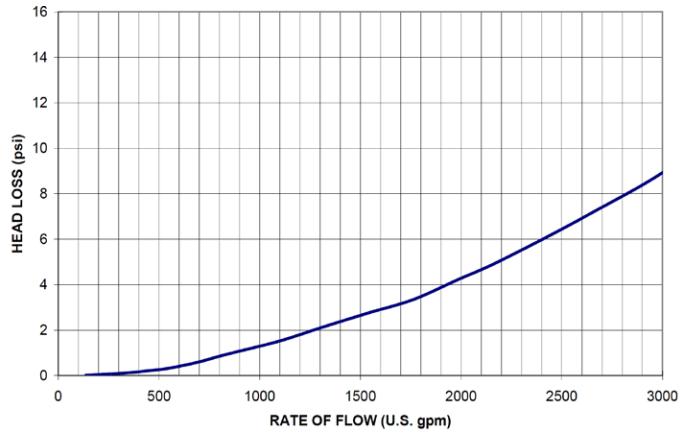
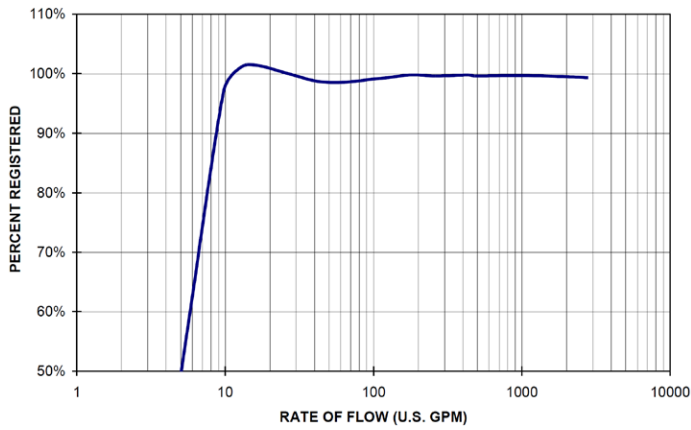
2 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week

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

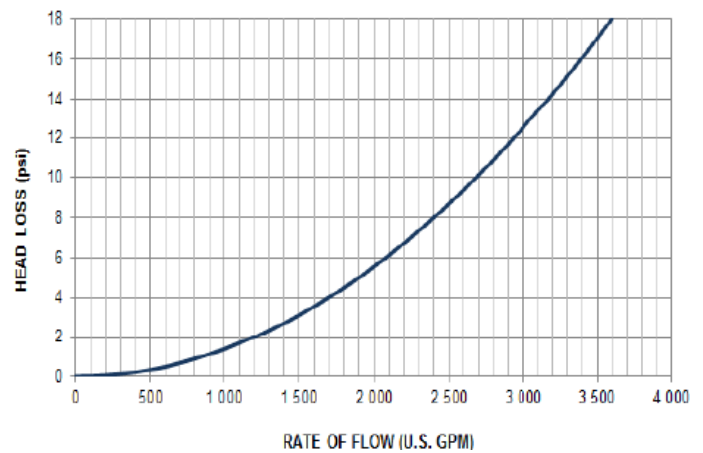
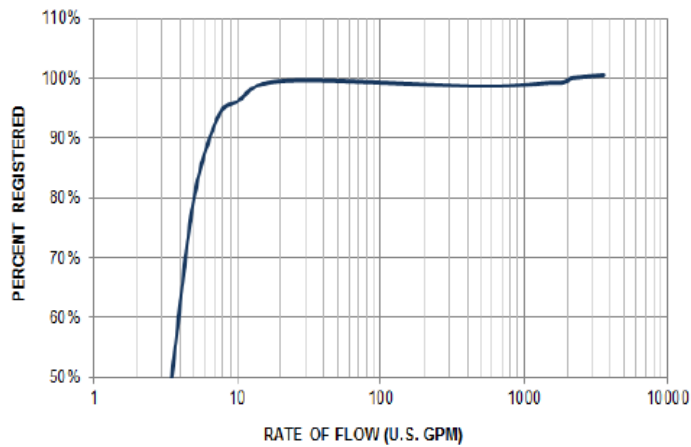
Flow Accuracy

Pressure Drop

Spectrum Enduro 2800D

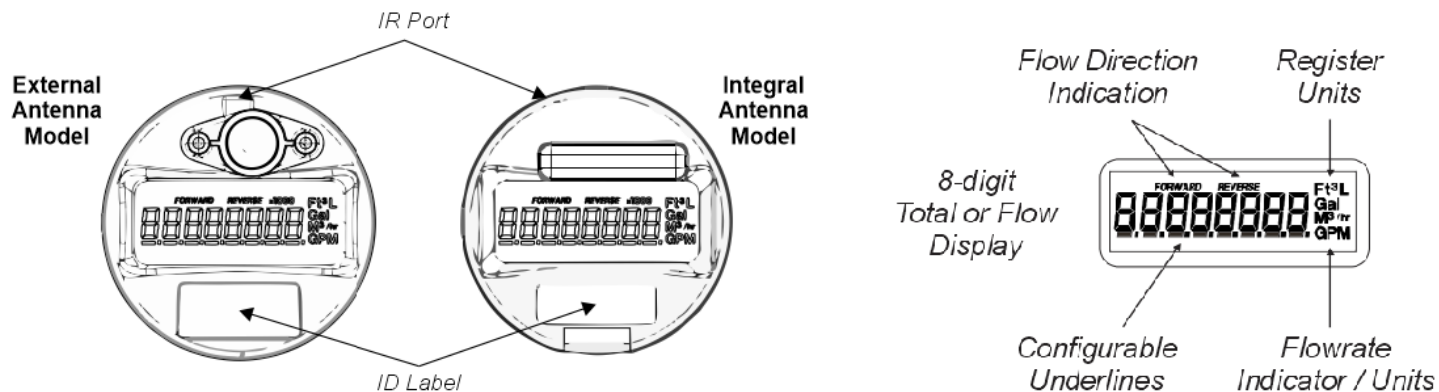


Spectrum Enduro 3600D



Registers

The Prism electronic register is the water industry's new standard for register performance, offering maximum resolution, a multitude of standard features, on-board data logging 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. It can be deployed on any Metron Spectrum Jet, Spectrum Hydrant, Spectrum PD and Spectrum Enduro water meters.



USG Configuration
0.1 Gallon Resolution

USG - Residential Meters (x0.1)



USG Flowrate - All Meters (x0.01)



Ft3 Configuration
0.01 Ft3 Resolution

Ft3 - Residential Meters (x0.01)



Ft3 Flowrate - All Meters (x0.01)

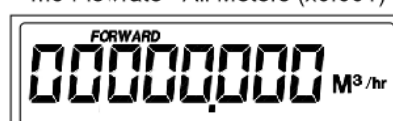


m3 Configuration
0.001 m3 Resolution

m3 - Residential Meters (x0.001)



m3 Flowrate - All Meters (x0.001)



Warranty

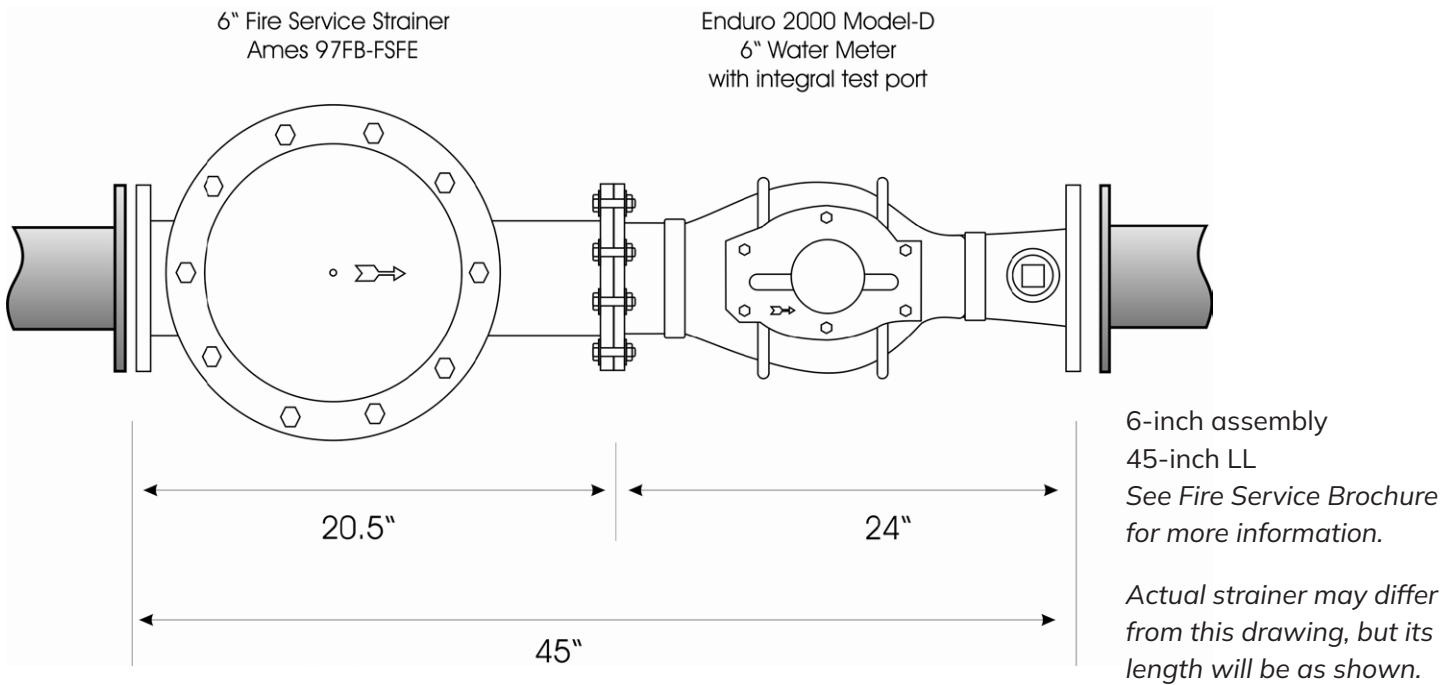
Please contact your Metron representative for formal warranty certificates.

Legal

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

Fire Service Configurations

FSA6



FSA8

