



The **XSTREAM** fuel injector measurement system is designed to accurately measure single injections from a Diesel or Gasoline Direct Injection Fuel injector. XSTREAM can handle up to fifteen (15) injection shots per combustion cycle and reports the volume, opening time and closing time for each of the individual shots. The metering head simulates cylinder pressures an injector sees in a normal application up to 100 Bar with a built-in safety feature to avoid damage sustained in the event of a component failure or misuse. XSTREAM can run completely self-contained without being integrated into the test machine or it can be integrated into the test machine.

**XSTREAM models:**

**Standard 170**

- 800 mm<sup>3</sup> Capacity

**High Capacity 254**

- 1800 mm<sup>3</sup> Capacity

**XSTREAM system components:**

1. Metering head
2. Drain Valve Control Unit
3. Signal Conditioner
4. Industrial PC



Reliable • Robust • Easy-to-use

**Features and Benefits**

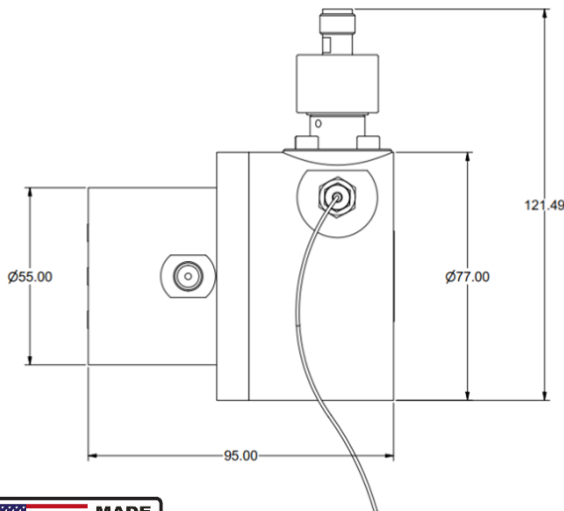
Feature	Benefit
Utilizes internal "Bias Relief"	<ul style="list-style-type: none"> <li>• Protects the meter in case of drain valve failure, electronic failure or obstruction</li> <li>• Valve automatically changes setting based on N<sub>2</sub> pressure supply</li> </ul>
Internal wetted components made from ceramic and stainless steel	<ul style="list-style-type: none"> <li>• Handles heat</li> <li>• Minimizes wear</li> </ul>
MCM designed Drain Valve	<ul style="list-style-type: none"> <li>• Provides durability and is easily replaced if needed</li> <li>• Complete drain valve can be replaced in 5 minutes</li> <li>• Provides high availability</li> </ul>
Compact design	<ul style="list-style-type: none"> <li>• Fits most cylinder spacing</li> </ul>
Adaptability	<ul style="list-style-type: none"> <li>• Works in any orientation</li> <li>• Adapts easily to different volumes and resolutions</li> <li>• Adaptable for class 1, division 1 use</li> </ul>
Injector cutout capability on failure	<ul style="list-style-type: none"> <li>• Redundant Safety</li> </ul>



Specifications

<b>Materials</b>	
Wetted components	Stainless Steel, Ceramic and coated steel
Internal Seals	Viton
<b>Utilities</b>	
Electrical Power	110-240 VAC, 50-60 Hz, 5A
N <sub>2</sub> Pressurized Gas	5-100 Bar Proportional to desired backpressure
N <sub>2</sub> Consumption	Nearly zero consumption while in operation, <10 SCCM with open injection port
Ambient temperature – Metering Head	24-150C
Ambient temperature – Electronics	15-50C
Temperature of injected fluid	Up to 75 °C Continuous 75-160 °C Intermittent
Fluid Compatibility	All calibration fluids and fuels compatible with Viton <b>Note: Class 1 rating for combustible fuels is possible</b>
<b>Specifications</b>	
Maximum number of Splits per combustion cycle	15
<b>Standard 170 Model</b>	
Measurement Range	1 - 800 mm <sup>3</sup> per Injection, 800 mm <sup>3</sup> Total per Injection Cycle, 950 mm <sup>3</sup> overfill
Accuracy	≤ 1 % of Reading (Averaged over 20 Injection Cycles)
Resolution	0.1 mm <sup>3</sup>
<b>High Capacity 254 Model</b>	
Measurement Range	10 - 1800 mm <sup>3</sup> per Injection, 1800 mm <sup>3</sup> Total per Injection Cycle, 2100 mm <sup>3</sup> overfill
Accuracy	≤ 1 % of Reading (Averaged over 20 Injection Cycles)
Resolution	0.1 mm <sup>3</sup>
Timing Resolution	2 μSec
Timing Accuracy	±100 μSec
Maximum Speed (Cam RPM)	6000 RPM Depending on backpressure, discharge volume, pattern and mode
<b>Connections</b>	
Nitrogen Port	5/16-24 UNF -2B for -2 SAE Port
Drain Valve Port	7/16-20 UNF Poly tube connection
Relief Port	5/16-24 UNF for -2 SAE port
Auxiliary input channel	Screw terminals (0-10V)
Once per Rev input	Screw terminals (0-10V)
Remote control/data acquisition	RS232, Ethernet I/P (Optional)
External display (Optional)	HDMI

Dimensions



With proper staggering, it is possible to achieve a cylinder spacing as small as 80 mm (3.14”).

