

StatenX: Experimental Siphon



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AG3000 SERIES FLANGED MAGMETER



Features

Rate and total indicator with light sensor
button controls

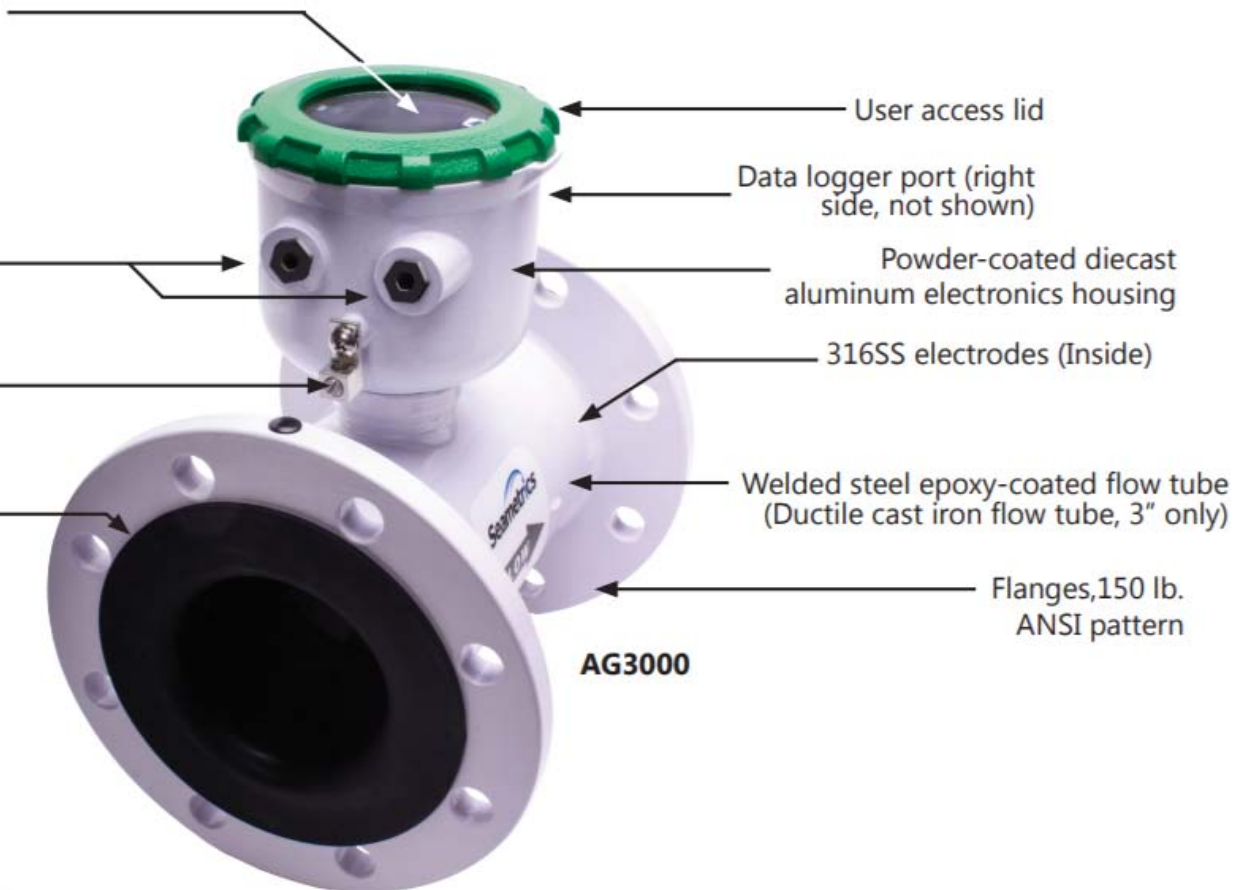
Power and Output cable port access

Equalization lug

Santoprene/Polypropylene Liner
(Noryl® Liner, 3" only)



Protective faceplate cover and lanyard



User access lid

Data logger port (right
side, not shown)

Powder-coated diecast
aluminum electronics housing

316SS electrodes (Inside)

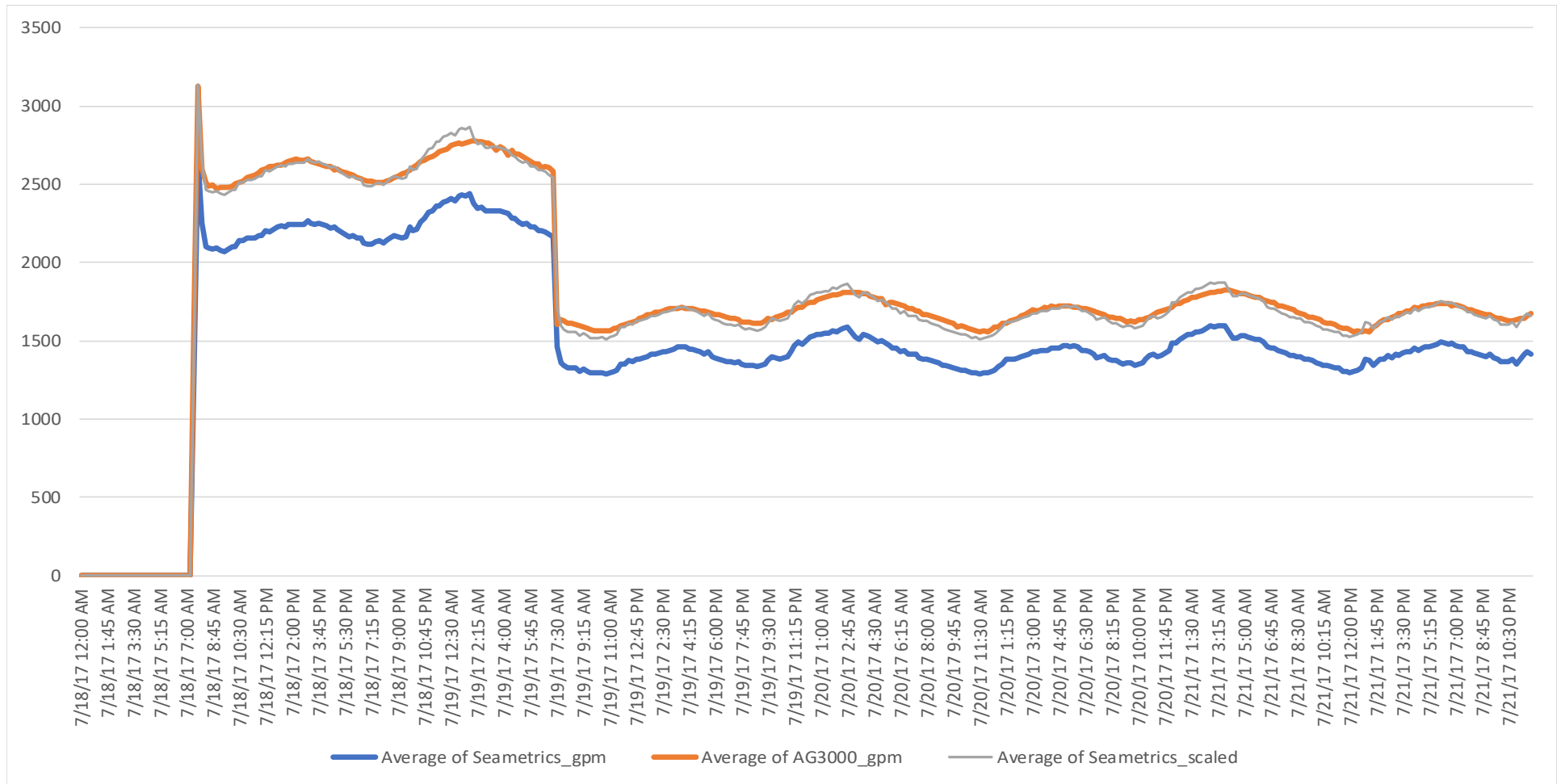
Welded steel epoxy-coated flow tube
(Ductile cast iron flow tube, 3" only)

Flanges, 150 lb.
ANSI pattern

AG3000

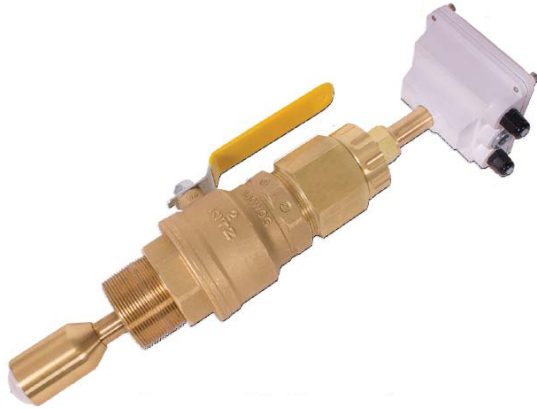


Accuracy Methods



- Average data to 15 min intervals
- Screen out bad readings
- Calculate Percent Error:
 - $\text{Abs}(\text{test-control})/\text{control}$
- Average percent error for all valid readings
- Scale data to minimize error
- Average percent error for scaled data

Meters



Seametrics Insertion Magnetic Meter
Model: EX250B – 09 – 40 – 50



Sierra Instruments Strap-on Ultrasonic Meter
Model: Innova Sonic 207i (prototype)



Mace Insertion Ultrasonic Meter
Model: Agriflow xCi

Meters



SoundWater Strap-on Ultrasonic Meter
Model: Orcas



Sierra Instruments Strap-on Ultrasonic Meter
Model: Innova Sonic 203



PWA Pressure Transducer
Model: Mark 1 PS

Telemetry



Wildeye Datalogger

Model: WILD-E-1FL and WILD-E-LR4



Ayyeka Wavelet

Model: WA2544-1



Mace Insertion Ultrasonic Meter

Model: Agriflow xCi

Telemetry



Davis Instruments Radio System
Model: Enviromonitor Node and Gateway



PWA Pressure Transducer
Model: Mark 1 PS

PRELIMINARY Results

Meter	Raw Percent Error	Scaled Percent Error	Meter Cost
Mace AgriFlow xCi Ultrasonic Insertion	19.79%	2.791%	\$4,923.00
Sierra Instruments InnovaSonic 207i Ultrasonic Strap-on	3.63%	2.64%	\$4,735.00
SoundWater Orcas Ultrasonic Strap-on	2.61%	2.00%	\$3,832.00
Seametrics Ex250 Magnetic Insertion	17.69%	4.57%	\$2,752.05
PWA Mark 1 PS Pressure Insertion	TBD	TBD	\$2,800.00*
Sierra Instruments InnovaSonic 203 Ultrasonic Strap-on	2.96%	1.50%	\$2,736.38

* Includes Telemetry

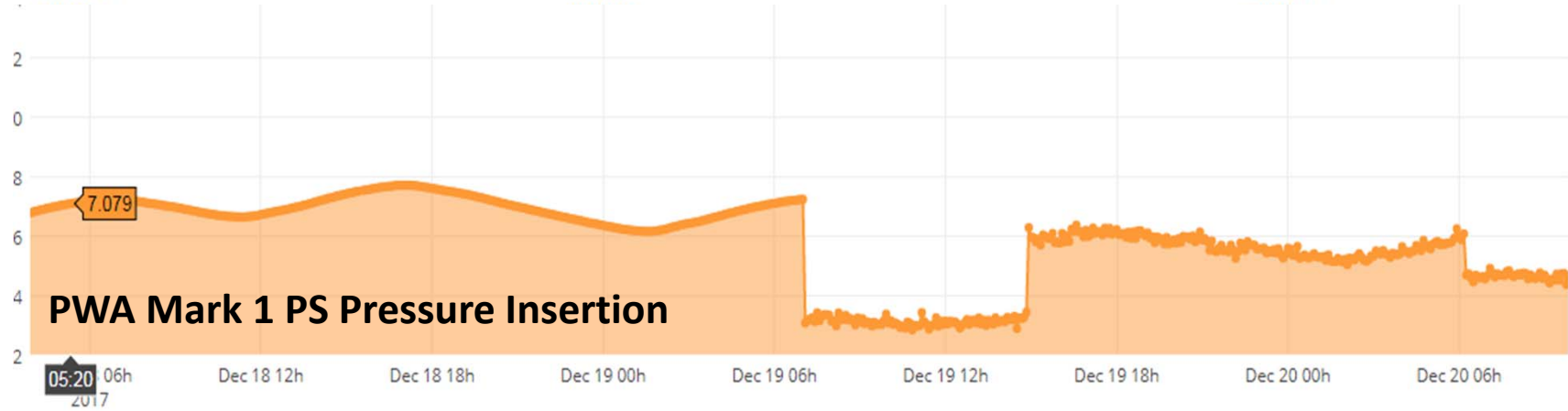
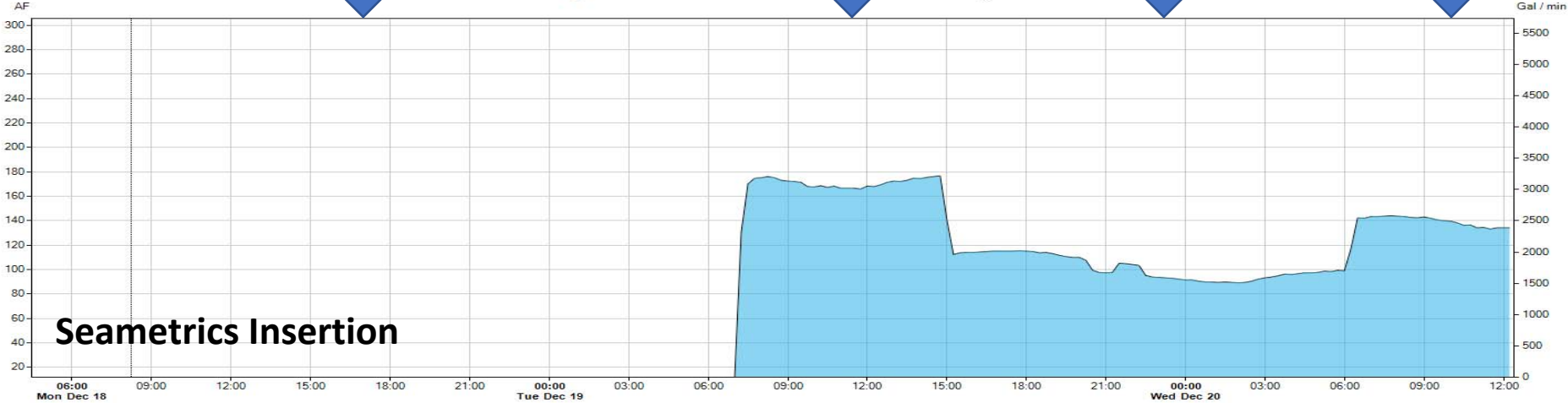
Siphon Off

Siphon Full

Siphon 1/2

Siphon 3/4

Siphon 7 - SM Insertion Flow Rate Meter Reading



The End

Blingee