

EX90-Series insertion flow meters are suitable for installations with a wide range of temperature, pressure, and environments that are corrosive or with debris. EX90 meters are available 4 inch to 12 inch pipe installations, and feature an electrode resistant to fouling. Includes a battery powered programmable controller with display, and output signal to remote devices.

FEATURES

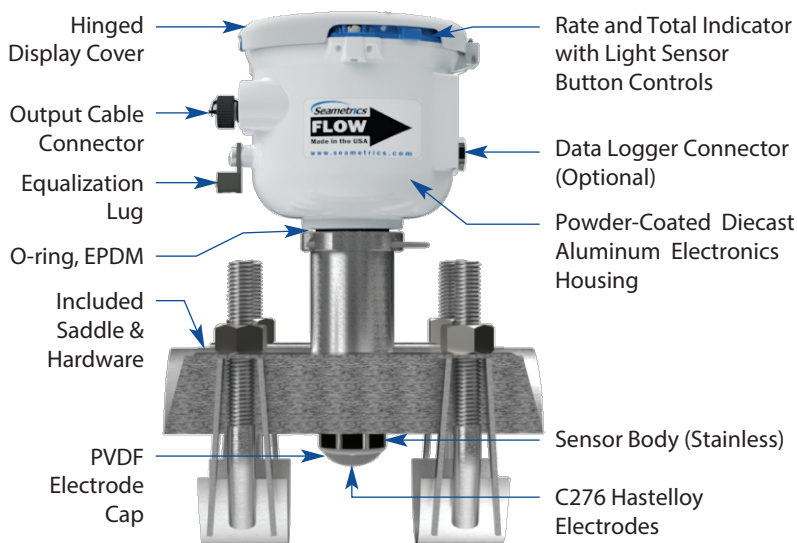
- Easy to install
- Easy to maintain
- No moving parts
- Pulse output standard
- IP67 rated
- Economical and Durable

APPLICATIONS

- Remediation
- Municipal water
- Water/Wastewater treatment
- Reuse/Reclaimed water
- Industrial processes
- Cooling towers
- Pump towers
- Dewatering



COMPONENT FEATURES



- Battery Powered
- Bidirectional Flow Reading
- Pulse Scaled Output
- Built-in Data Logger (Optional)

Quickly and easily change Total Volume Units, Flow Rate Units, Pulse Output Scaling, and many other settings using the two light sensor button controls on the display panel.

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(800) 833-7958

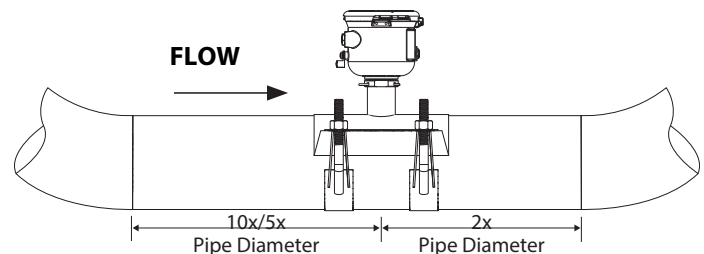
Geotech Environmental Equipment, Inc.
2650 East 40th Avenue Denver, Colorado 80205
(303) 320-4764 FAX (303) 322 7242
email: sales@geotechenv.com website: www.geotechenv.com

Technical Specifications				
Pipe Size	4" to 12"			
Materials	Sensor Body	315 SS		
	Electrodes	Hastelloy		
	Housing	Powder-coated diecast aluminum		
	Electrode Cap	PVDF (Kynar*)		
	O-Ring	EPDM		
Temperature	Operating	10° to 140° F (-12° to 60° C)		
	Storage	-40° to 158°F (-40° to 70°C)		
	Fluid Temp.	32° to 200°F (0° to 93°C)		
Pressure	200 psi (14 bar)			
Calibration Accuracy	0.5-4.5 m/s (1.64-14.76 ft./sec.)	±2% of reading		
	0.3-0.5 m/s (0.98-1.64 ft./sec.)	±(2% of reading ±.25% of full scale)		
Display	Type	128 X 64 dot-matrix LCD		
	Digits	5 Digit Rate	5 Digit Rate	8 Digit Total
	Units	Rate Volume Units	Rate Time Units	Total Volume Units
Please Note: All Meters are factory set for gallons per minute (GPM) rate and acre foot total. If other units are required, they can be set in the field.		Gallons	Second	Gallons
		Liters	Minute	Gallons x 10
		Barrels (42 gallons)	Hour	Gallons x 100
		Cubic Feet	Day	Gallons x 1000
		Cubic Meters		Million Gallons
		Million Gallons ¹		Liters
		Mega Liters ¹		Kilo Leters
		Imperial Gallons		Mega Liters
		Million Imperial Gallons ¹		Barrels (42 gallons)
				Cubic Meters
	Bidirectional	Forward Total, Reverse Total, Net Total, Batch Forward, Batch Reverse Total		
Power	One lithium 7.2 V 'D' size battery pack, replaceable. DC Power Available for 4-2mA max.			
Scaled Pulse Output	Signal	Current sinking pulse, isolated, 36 VDC at 10 mA max.		
	Pulse Rates	User-scalable from 0.1 to 99,999.9 volume units/pulse. Pulse width varies with output frequency, 150 pulses/sec max.		
Options	4-20Ma Current Loop	Isolated, passive, 24Vdc, 650 maximum current loop (External DC powered units only)		
	Serial Communications	Isolated, asynchronous serial RS485, Modbus RTU protocol		
	Sensus Smart Output	Connects to Sensus SmartPoint		
Optional Output Cable	20 ft. (6 m) standard length polyurethane jacketed cable — for power and outputs (Lengths up to 200'/60 m available).			
Conductivity	>20 microSiemens/cm			
Empty Pipe Detection	Hardware/Software, conductivity-based			
Regulatory	Certified to NSF/ANSI standard 61 and NSF 372			
Environmental	IP67			

¹ Rate Time Unit is available in Day only. Kynar is a registered trademark of Arkema, Inc.

FLOW RANGE

Nominal Pipe Size	4"	6"	8"	10"	12"
Low Flow Cutoff GPM	19.3	43.11	77.1	120.5	173.5
Low Flow Cutoff LPS	1.22	2.72	4.86	7.6	10.95
Min GPM	64.3	144.6	257	401.6	578.3
Min LPS	4.1	9.1	16.2	25.3	36.5
Max GPM	578	1301	2313	3614	5204
Max LPS	36.5	82.1	145.9	228	328.3



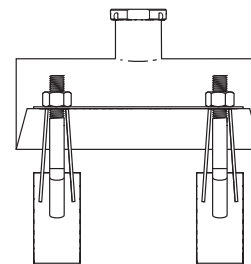
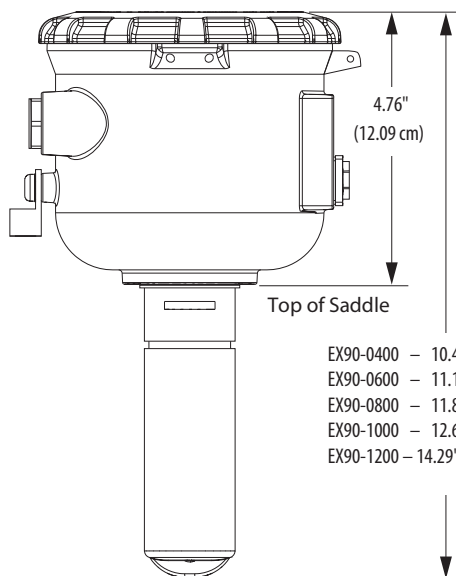
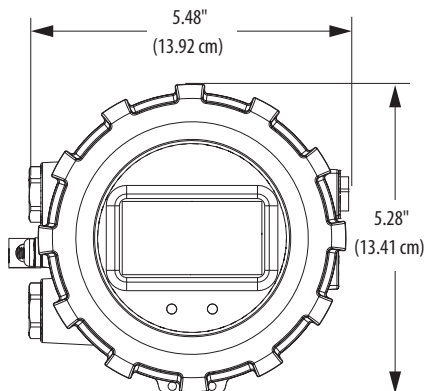
Upstream straight pipe is selected during initial setup. Upstream options are 5X or 10X the diameter and are based on the amount of straight pipe available in either new or propeller meter replacement installation. Downstream straight pipe requirement is 2X the diameter. See programming setup for details.

*Specifications subject to change.

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DIMENSIONS



Each saddle has a range of actual pipe size O.D. that it will work with. When you order your meter, you will specify the nominal pipe size and the saddle provided will work with the following actual pipe O.D.

Saddle Size	Range
4"	4.00"-4.90"
6"	6.00"-6.90"
8"	8.00"-9.05"
10"	10.00"-11.10"
12"	12.10"-13.20"

Consult Geotech if your OD does not match.

HOW TO ORDER WORKSHEET

1 **EX90**
2
3
4
5

2 **Power:** BX = Battery
 3 **Outputs:** X = No optional output

1	2	3	4	5
Size	Power	Optional Output (Comes standard with one pulse output)	Options	Power/Output Cable (Must select one)
-0400 4"	-BX	-X (requires single cable for pulse output)	-XX None	-0000 No Cable (customer will supply)
-0600 6"			-01 Data Logger	-0064 6 meter (20 ft.)
-0800 8"				-0154 15 meter (50 ft.)
-1000 10"				-0304 30 meter (100 ft.)
-1200 12"				-0454 45 meter (150 ft.)
				-0604 60 meter (200 ft.)

Note: All meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be programmed in the field.

Note 2: Saddle included with meter.

Note 3: The EX90 can be externally powered by connecting DC power with the power/output cable. Batteries then serve as backup power.

For chemical or fertilizer injection applications, the injection point must be placed downstream of the meter or far enough upstream for complete mixing to occur before the flow reaches the meter. (See fertigation technical bulletin on Seametrics website, seametrics.com)

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Order with Weldolet (Select weldolet type below)

<div style="display: flex; justify-content: space-around; align-items: center;"> 1 2 3 4 5 </div> <div style="text-align: center; margin-top: 10px;"> <h2 style="margin: 0;">EX90</h2> <div style="display: flex; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> </div>
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>2 Power: BX = Battery</p> </div> <div style="width: 45%;"> <p>3 Outputs: X = No optional output</p> </div> </div>

1 Size	2 Power	3 Optional Output <i>(Comes standard with one pulse output)</i>	4 Options	5 Power/Output Cable <i>(Must select one)</i>
-040R 4" -060R 6" -080R 8" -100R 10" -120R 12"	-BX	-X <i>(requires 4-pin cable for pulse output)</i> -S <i>(requires 8-pin cable)</i>	-XX None -01 Data Logger -02 Sensus Smart Output <i>(Includes 6' Cable)</i>	0000 No Cable <i>(Cable required for power/output)</i>
	-D1 -D2	-L <i>(requires 8-pin cable)</i>		<u>4 Conductor</u> <u>8 Conductor</u> 0064 0068 6 meter (20 ft) 0154 0158 15 meter (50 ft) 0304 0308 30 meter (100 ft) 0454 0458 45 meter (150 ft) 0604 0608 60 meter (200 ft)

Modbus is a registered trademark of Schneider Electric.

Note: All meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be programmed in the field.

Note2: Saddle included with meter

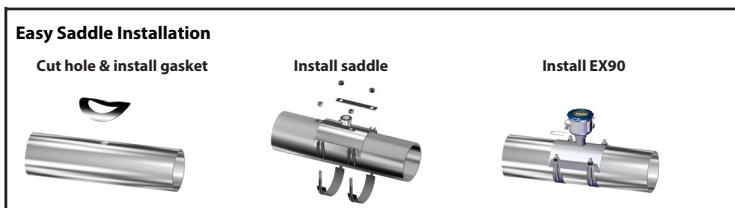
Note3: The EX90-BX can be externally powered by connecting DC power with the power/output cable. Batteries then serve as backup power.

Note4: Battery life is shortened when using Modbus with battery powered units. Expected battery life is approximately 1 year, based on usage.

For chemical or fertilizer injection applications, the injection point must be placed downstream of the meter or far enough upstream for complete mixing to occur before the flow reaches the meter. (See fertigation technical bulletin on Seametrics website, seametrics.com.)

User is responsible for reviewing end use application with their supplier for product suitability.

Weldolet #	DESCRIPTION
104122-04-CS	Weldolet Kit, Carbon Steel 4"
104122-04-SS	Weldolet Kit, Stainless Steel 4"
104122-06-CS	Weldolet Kit, Carbon Steel 6"
104122-06-SS	Weldolet Kit, Stainless Steel 6"
104122-08-CS	Weldolet Kit, Carbon Steel 8"
104122-08-SS	Weldolet Kit, Stainless Steel 8"
104122-10-CS	Weldolet Kit, Carbon Steel 10"
104122-10-SS	Weldolet Kit, Stainless Steel 10"
104122-12-CS	Weldolet Kit, Carbon Steel 12"
104122-12-SS	Weldolet Kit, Stainless Steel 12"



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