

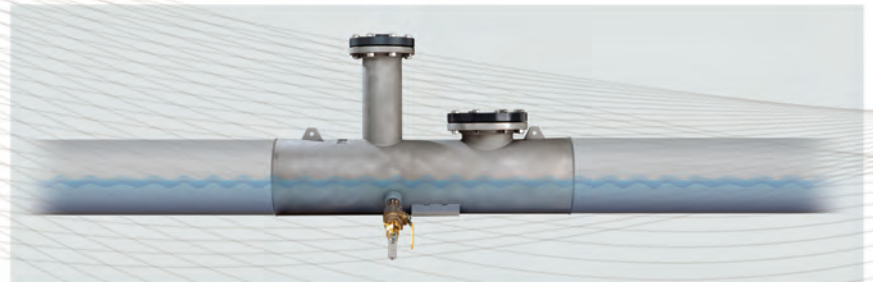
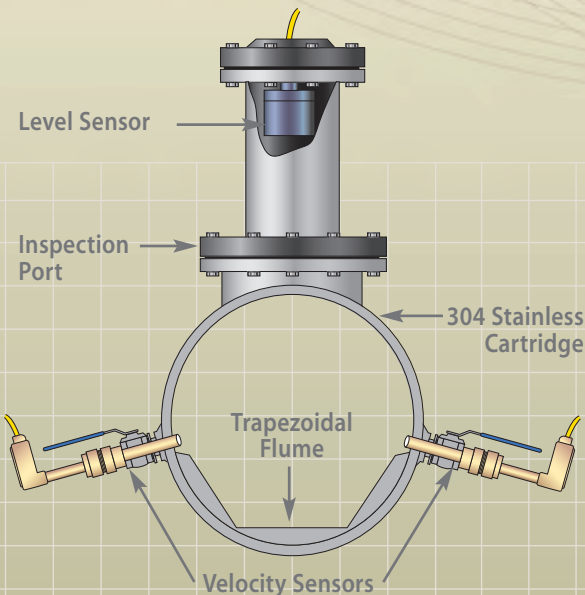
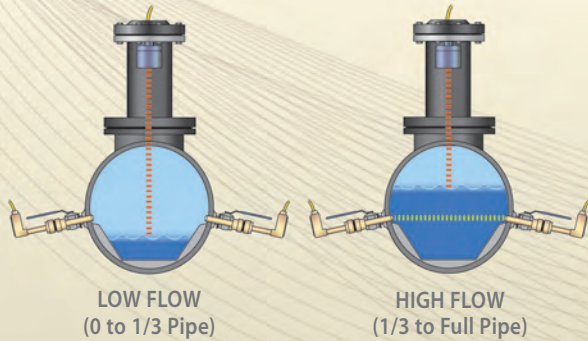
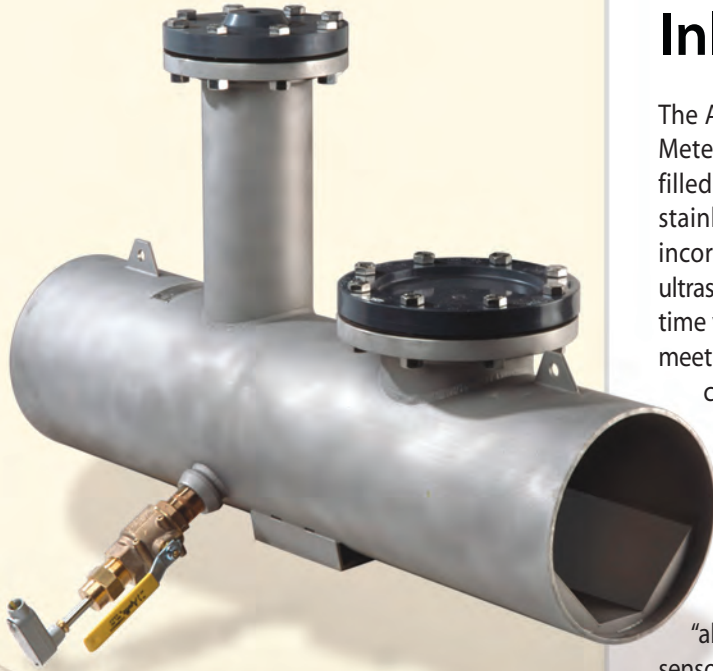
Inline Cartridge Meters

The Accuron 7700 is an Inline Cartridge Meter specifically designed for partially filled closed pipe applications. A 304 stainless steel spool-type Cartridge, incorporating a trapezoidal flume, ultrasonic level sensor, and a pair of transit-time velocity sensors is manufactured to meet exact customer laying length and end



connection specifications. During periods of minimal flow (Zero to 1/3 pipe), measurements are achieved through a highly efficient combination of a trapezoidal flume (traceable to Bureau of Reclamation WinFlume standards) and an ultrasonic level sensor enclosed within an "above the flow" protective casing. During periods of maximum flow (1/3 to full pipe), measurements are achieved through proven area-velocity methods by combining a pair of chordal transit-time velocity sensors with the same "above the flow" ultrasonic level sensor. The bi-directional transit-time velocity sensors also allow for monitoring of reverse and stagnant flow conditions.

Each Cartridge is provided with an inspection port located directly above the trapezoidal flume for calibration verification. Should the need ever arise for cleaning or replacement of a sensor, level sensor access is provided through a flange located on top of the protective casing. Velocity sensors are simply removed and cleaned through the utilization of isolation ball valves integrated within each sensor housing. This highly efficient maintenance feature eliminates the requirement for Cartridge removal or dewatering of the system.



Velocity Sensors	PVC/304 Stainless
Sensor Cable	Triax w/PVC Coating
Cable Length	Max: 1000 feet
Operating Temp.	-40° F to 158° F (-40° C to 70° C)
Ball Valve	Bronze (2")

Level Sensor	PVC
Sensor Cable	4 Cond. w/PVC Coating
Cable Length	Max: 1000 feet
Operating Temp.	-40° F to 158° F (-40° C to 70° C)

METER SPECIFICATIONS (Bi-directional)

FACTORY PROGRAMMED FLOWMETERS



Pre-programmed at the factory for specific customer applications, the Accuron flowmeter is a highly advanced microprocessor-based ultrasonic flow transmitter for extremely precise measurement of flow in open channels.

DATA LOGGING

The Accuron has a built-in datalogger with eight distinct channels for logging flow and totals. The storage capacity for a single channel at 5 minute intervals is 113 days. Logger data may be visually accessed on the display of the meter in pre-programmed time intervals or retrieved through a laptop or optional modem installed within the enclosure of the meter.

Daily Averages: Daily summary allows viewing of the previous eight days. This includes times, dates, averages, minimums, maximums and totals.

Logger Graph: In addition, a bar graph may be visually displayed on the Accuron. The graph will display the stored logger data in pre-programmed time intervals.

Data Retrieval: Logger data can be collected by using a laptop computer or an optional modem installed within the Accuron enclosure.

ENCLOSURE

Standard	IP66 / Nema 4, 4X polycarbonate enclosure
Optional	Explosionproof, Aluminum Enclosure Class I, Grps. C & D, Class II, Grps. E, F, G, Div. 1 & 2
Accessories	Heater and thermostat, Door Lock

TEMPERATURE

Standard	-4° to 158°F (-20 to 70°C)
With Heater	-40° to 158°F (-40 to 70°C)

OUTPUTS

3) 4-20 mA (Flow, Level, Velocity)	Analog isolated into 800 ohms max, monitored to detect open circuits. RFI and gas discharge surge protection and two fuses.
Relay Alarms	3 SPDT (plug-in) 2.5 Amps
RS-232 Serial Port	1200-38400 Baud, Modbus RTU
RS-485 Serial Port	Optically isolated, Modbus RTU
Network Protocols	Modbus, Profibus or DeviceNet
DC Power Out	12 VDC. 100mA maximum

DISPLAY

Backlit LCD	Graphical LED
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POWER



Wattage	30
Voltage	80/240 VAC, 50/60 Hz / 12-28VDC @ 550 mA.

DATA LOGGING

Non-volatile flash memory, storage of up to 32768 records.
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SUGGESTED SPECIFICATIONS: An ultrasonic microprocessor-based Inline Cartridge Meter shall be installed at the location on the plans in accordance with the manufactures recommendation. A field-ready _____ (pipe size) stainless steel cartridge, containing a stainless steel trapezoidal flume/ultrasonic level sensor/transit-time velocity sensor combination shall be provided with each flowmeter. The IP66/Nema 4,4X flowmeter (or Chartmeter) shall be factory programmed for the specific application and be provided with a datalogger integral to the electronics. The Cartridge Meter must be capable of field validation prior to installation of permanent power. The unit shall be Model Accuron 7700 as manufactured by Eastech Flow Controls, Tulsa, OK or equal.

ORDERING GUIDE

CARTRIDGE	METER	NOMINAL PIPE SIZE	OVERALL LAYING LENGTH	END CONNECTIONS		SENSOR CABLE	OPTIONS	PROGRAM	DATA RETRIEVAL
				Up-stream	Down-stream				
 <p>CARTRIDGE 77</p> <p>Accuracy: (0 - 1/3 Pipe): ±1-5% (1/3 - Full Pipe): ±1-3%</p> <p>Turndown: 60:1</p> <p>Rangeability: 40 to 0.1ft/sec</p> <p>Repeatability: ±2% of actual flow</p>	 <p>METER 10</p> <p>Nema 4,4X IP66 3-4-20mA RS232/485 3 Relays Datalogger Bi-directional</p>	Specify Pipe I.D.	Please Specify	Up- stream	Down- stream	30 ft W	Integrated Chart Recorder Circular Chart 1 Day 7 Day 31 Day (please specify) G Heater & Thermostat B Keylock C Splice Kit D	Gal./Min. A	Modem (phone line) M Profibus E Device- Net F
						50 ft. X		Cu. Ft./Sec. H	
						100 ft. Y		Mil. Gal/Day J	
						200 ft. Z		Lit./Sec. K	
						(Over 200 ft. please specify)		Gal./Hr. L Other (please specify)	

