

FLO-DETECTOR

DUAL AXIS SURFACE VELOCITY MEASUREMENT



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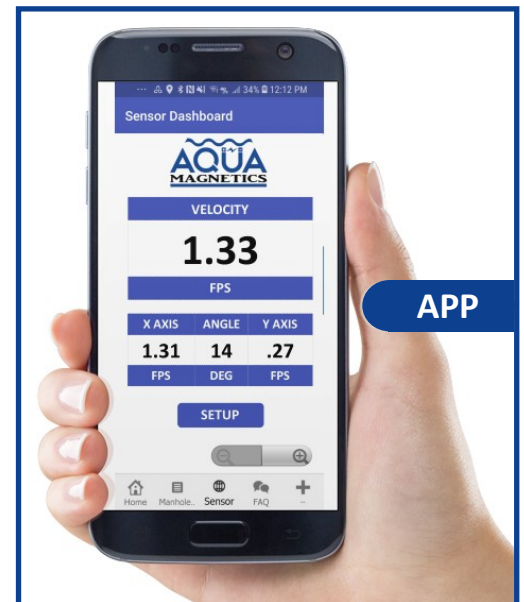
The Model 302 FLO-DETECTOR is a “first of its kind” for instantaneous flow measurements in low depth monitoring situations. The electromagnetic sensor is extremely accurate and has no moving parts. Specialized, high quality stainless steel electrodes pierce the water surface and obtain surface velocity measurements with minimal intrusion. Use the FLO-DETECTOR to measure parking lot runoff, urban flooding, roadside drainage, low level stream flow, and other open channel applications.

WiFi data is transmitted from the sensor electronics to any smartphone device.



Data from the Model 302 FLO-DETECTOR is transmitted to any Wi-Fi compatible smart phone or tablet.

1. Connect to associated WIFI
2. Scan QR code on instrument
3. View instantaneous real-time data from the device



ELECTROMAGNETIC SENSOR



- 8 Foot Sensor Cable (standard)
- Precision Engineered
- Measures surface velocity
- Leveling indicator
- Stainless Steel Electrodes

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The Model 302 ECU (electronics control unit) are tethered to the electromagnetic velocity transducer. Flow Signals are processed by the electronics and transmitted wirelessly (WIFI) to a user's smartphone or tablet device. The entire unit is powered by a standard DeWalt compatible snap in battery, allowing you to hot swap batteries when needed.

1 EA.



1 EA.



2 EA.



FLO-PRO MODEL 202

- Electronics Package with WIFI Included
- Stream and Sewer Flow Apps Included
- Sensor and 8 Foot Cable Included
- Carrying bag included

STANDARD BATTERY PACK

- Battery Is Hot Swappable
- Snaps Into Instrument Housing
- Standard DeWalt 12Volt Compatible
- 2 Batteries (1 for unit , 1 spare) & 1 Charger Included

Choose the Stream Flow App to get the results you are after. Cutting edge modern interfaces automatically scale to the device you are on. Whether it's a smartphone, tablet, or PC; you are in full control. Export and share data to your preferred output type.

Aqua-Mag Stream Flow

Mid-Section method with evenly spaced stations • Depth in **feet**, velocity in **ft/s**.

Site ID

Pine Basin-001

Optional: saved locally with your inputs.

Inputs

Stream Width (ft)	# of Measurement Points
30	6
Bank-to-bank surface width across your transect. 2-10 stations, spaced evenly across the width.	

Pt	Depth (ft)	Velocity (ft/s)
#1	0.5	0.8
#2	1.2	1.5
#3	2.1	2.2
#4	1.8	1.9
#5	0.9	1.1
#6	0.4	0.6

Autofill Demo

Reset

Calculate Flow

Area = 38.7 ft² • Avg V = 1.729 ft/s • Station spacing ≈ 6 ft

► Assumptions & Method

Results

Export CSV Export JSON Export XLSX Export PNG Print / PDF

Copy Summary

Flow (CFS)

66.9

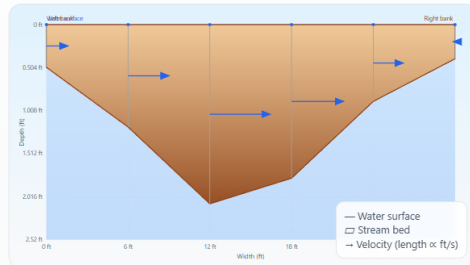
Flow (GPM)

30,026.794

Flow (MGD)

43.239

Cross-Section



STREAM FLOW APP

- Multi Point Profiling Across Stream
- Flow Calculation
- Stream Bed Contour Illustration
- Export & Share - CSV, JSON, XLSX, PNG, Print/PDF

Flow Calculator

Partially Filled Circular Pipe

Site ID

A01-100

Pipe Diameter (inches)	Flow Level / Depth (inches)	Velocity (feet/second)
12	3.5	2.25

Calculate

Clear

$Q = A_{\text{wetted}} \times V$, where A is the circular segment area corresponding to the entered flow depth. Units are converted to report in MGD, GPM, CFS, and GPD.

Cubic Feet per Second (CFS)

0.4288

Gallons per Minute (GPM)

192.4423

Million Gallons per Day (MGD)

0.2771

Gallons per Day (GPD)

277,117.1198

Export CSV

Export JSON

Export XLSX

Export PNG

Print / PDF

☐ Pipe ☒ Wetted area ☒ h (depth) & r (radius)

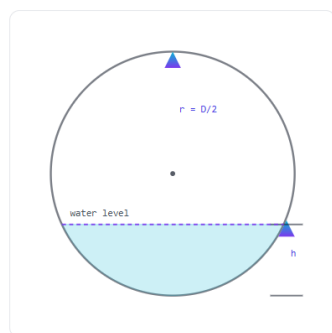


Diagram: Depth h is measured upward from the invert (bottom) to the water surface. Radius $r = D/2$. The cyan region is the wetted area used for A_{wetted} .

SEWER FLOW APP

- Pipe Size, Flow Depth, & Velocity
- Flow Calculation
- CFS, GPM, MGD, GPD
- Export & Share - CSV, JSON, XLSX, PNG, Print/PDF



Aqua-Magnetics, LLC calibrates and verifies each instrument prior to shipment. Calibrations are performed in a 120 foot long, NIST traceable sensor towing facility. Additionally, Aqua-Magnetics utilizes recirculating flow loops for instantaneous and long term analysis of equipment accuracy and performance.

As an additional service, we provide annual calibrations for; Marsh-McBirney Model 201A & D, Marsh-McBirney Model 2000 (Flo-Mate), and the Aqua-Magnetics (Flo-Pro).



NIST TRACEABLE FACILITY

- 120 Foot Sensor Towing Facility
- Variable Speed Sled
- Single and Dual Axis Sensor Capability
- Annual Calibration Service
- Calibrations Certified



120 Foot Towing Facility



Recirculating Flow Loop

SPECIFICATIONS

VELOCITY TRANSDUCER	
METHOD	ELECTROMAGNETIC
ACCURACY	+/- 2% OF READING
ZERO STABILITY	+/- 0.05 FPS (0.015 MPS)
RESOLUTION	XX.XX
RANGE	0-20 FPS (0-6.09 MPS)
BODY MATERIAL	BLACK POLYURETHANE SHORE 70D DUROMETER
INGRESS PROTECTION	IP68
ELECTRODES	STAINLESS STEEL
CABLE	8 FOOT LENGTH
DIMENSIONS	6" DIAMETER X 1.38" HIGH (INCLUDES ELECTRODES)
ELECTRONICS	
HOUSING	INJECTION MOLDED PLASTIC
ENVIRONMENTAL	WATER RESISTANT
SHOULDER STRAP	61" LONG X 1.5" WIDE
MAIN CPU	CORTEX M0 ARM 32 BIT SAMD21 CPU
WIFI	802.11 B,G,N 2.4GHZ DUAL CORE CPU
SOFTWARE	APP EMBEDDED ON CHIP TRANSMITS TO SMARTPHONE VIA WIFI
POWER	12 VOLT DEWALT COMPATIBLE BATTERY RECHARGEABLE LITHIUM ION

^ Specifications are subject to change without notice



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IN THE USA



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