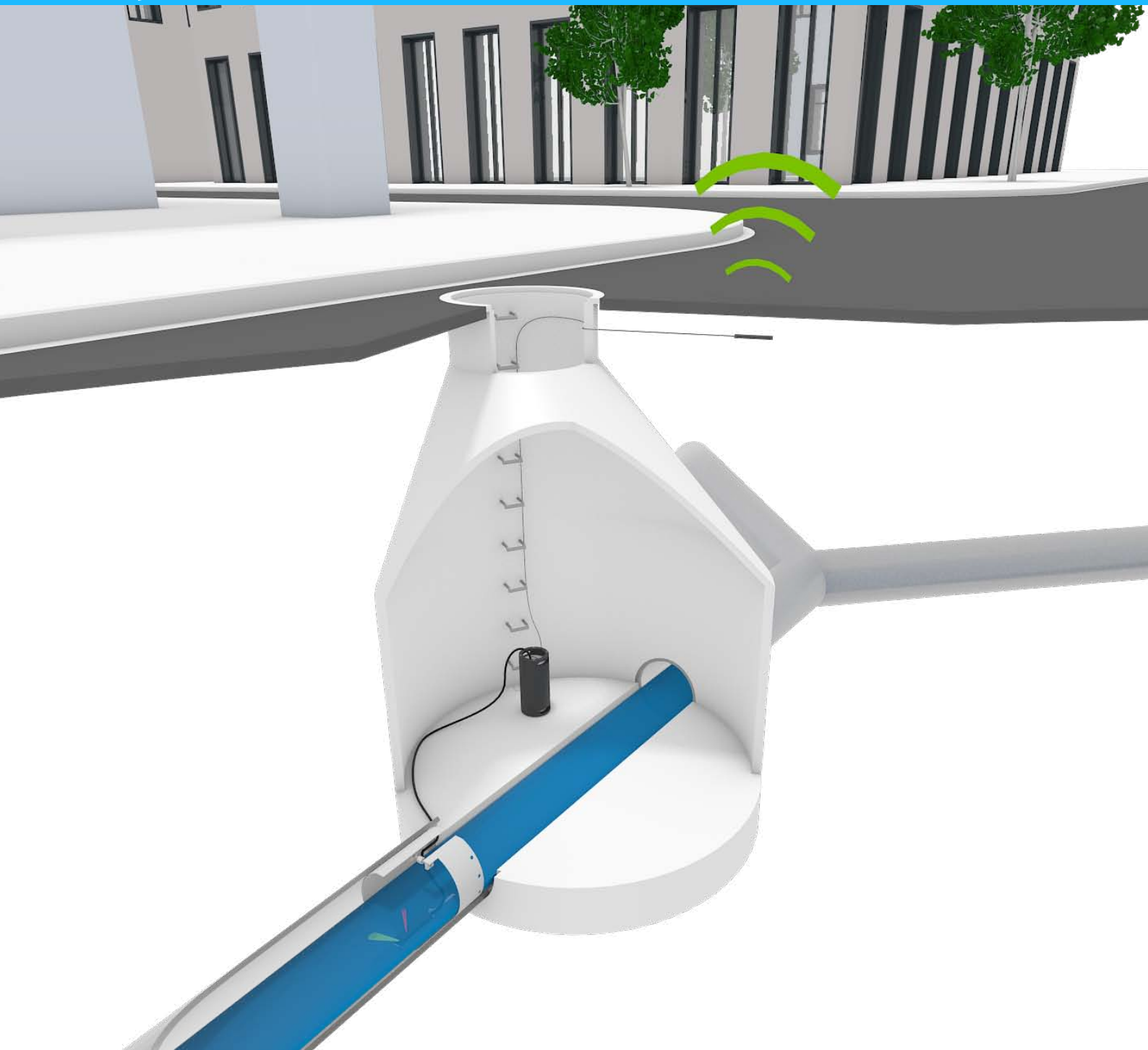


**Portable Flow Meter  
for Pipes or Open Channels**

**Q-Eye MII**





# Q-Eye MII

The **Q-Eye M-II** portable velocity area flow meter is designed for applications in full or partially full pipes 100 - 1000 mm (4 – 40 inches) in diameter, or open channels with flow depths 40 – 1000 mm (1,5 - 40 inches).

It uses advanced Doppler profiling technology to directly measure velocity profiles making it the best choice for sites with non-uniform, rapidly changing, backwatered, near zero, negative or reverse flow conditions. This eliminates the need for on-site calibration, thereby reducing significantly the cost of installation.

Combined with an integral upward looking ultrasonic or a secondary external pressure sensor (optional) for determining the depth, the meter is using a numerical model for averaged velocity in the entire cross section and the continuity equation to calculate flow.

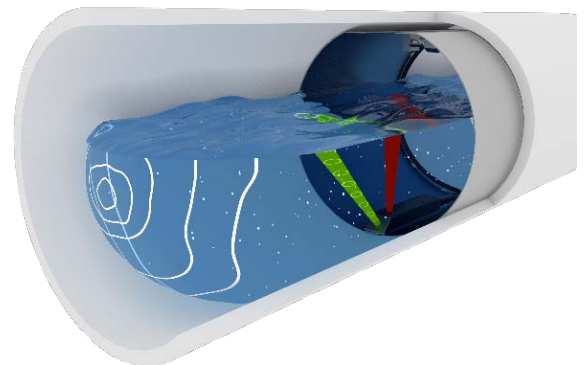


**Flow Meter**  
Type Q-Eye MII

Information on the level, velocity, flow, signal strength and battery can be taken at regular intervals between 30 seconds and 60 minutes. This meter will log the data (2MByte) for more than 70 days without changing the batteries. In addition the flow meter can control a sampler in a flow-proportional sampling mode by means of a pulse output.

## Data Transmission

Automatic data transmission via GPRS communication is an option and can be used worldwide. The logged data can be sent to any host computer (FTP-Server) or to HydroVision's web-based HydroCenter at a user-selectable frequency (typically 4 times a day, once a day or once a week).



## Profiling Technology

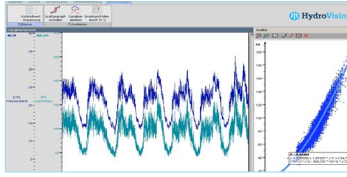
Pulsed wave Doppler systems use a transducer that transmits short acoustic pulses. The received echo is range-gated to provide velocity measurements selectively from a small segment along the acoustic beam, step by step over the entire velocity profile.

Reflections of particles in other areas do not have any influence on the velocity measurement. Additionally the 1 MHz sensor provides higher data resolution by detecting smaller particles.

## The Q-Eye M-II is ideal for temporary flow monitoring studies/surveys:

- » Wastewater collection systems (Infiltration studies, hydraulic model calibration, event notification, long term trend analysis)
- » Combined sewer systems (Characterize combined sewer overflow (CSO) impacts)
- » Wastewater treatment facilities (Influent measurement, real-time process control, effluent measurement)
- » Irrigation channels (Supply management)
- » Industrial flows (Flow measurement, process optimization)
- » Storm water runoff monitoring

# Technical Information



## Software

HydroVision's **Q-Vision SetUp** software lets you easily program the unit, view current and download logged data. Drop-down menus allow even unexperienced users to quickly learn the program. The software communicates via a serial connection. **Q-Vision evaluation** is HydroVision's flagship graphing and analysis software package for Q-Eye M-II logged data. Both software tools run on Windows computers.

## Velocity

Low Profile Velocity Area Sensor



The submersible depth and velocity sensor, which measures only 15 x 20 x 110 mm (H x W x L) (0,60 x 0,78 x 4,24 inches) is the smallest sensor of its type currently available. A low profile means less interference, which results in more accurate velocity measurements, especially in low-flow situations.

## Level

Pressure Sensor



The external pressure sensor is the latest generation of fully submersible high performance sensor (accuracy +/-0,1% FS) for measurement of hydrostatic levels. The slim line welded titanium body incorporates many enhanced features to provide reliable and long term accurate level measurements. In addition, a full range of related accessories simplifies installation, operation and maintenance.

## Mounting Systems

Mounting Plate, Spring Ring and Scissors Rings



All sensors can be attached to a mounting plate, spring and scissors rings to install the sensors in minutes and reducing time in the manhole. The sensor is first attached to a carrier and can then slide onto any of the compatible mounting systems. This maintains a height, suitable for measuring flow rates and velocities at very low water levels. To install the sensors in rectangular, trapezoidal or earthen channels, we recommend the sensor mounting plate. Stainless steel spring rings simplify sensor installation in cylindrical pipes. 6 standard diameter sizes from 200 mm (8 inches) to 600 mm (24 inches) are available. You can install the sensor and fasten the cable to the downstream edge of the ring in place before you enter the manhole. The self-expanding device is tight by expanding the band for a friction fit inside the pipe. The adjustable scissors ring is installed in large diameter pipes from 500 mm (20 inches) to 1450 mm (57 inches) in diameter. It consists of a base section, one or more pairs of extensions to fit the size of the pipe and a scissors mechanism.

## WEB Data

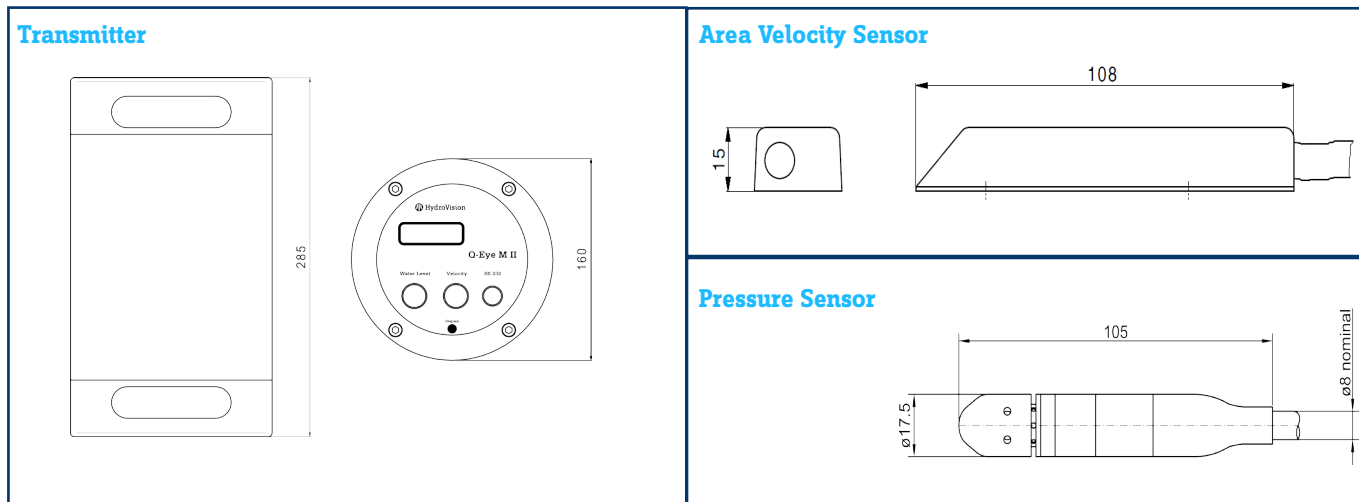
hosted via the HV HydroCenter



### Web-based data logging

HydroVision's web-based data logging system enables real-time remote access to your data. HydroCenter is our web-based graphing and analysis platform that provides 24/7 web access to data collected with your flow meter.

# Technical Data



## Q-Eye M II (Transmitter)

LCD Display:	1line, 8 characters
Memory:	2 MB (internal)
Interfaces:	RS-232
Outputs:	1x Impulse
Power Supply:	16 Ah Alkaline batteries (6x Mono/D-size) or 10 Ah rechargeable NiMH
Protection Class:	IP69K (NEMA6)
Housing Material:	POM (Polyoxymethylen)
Dimensions:	Ø 160 mm ; height: 280 mm
Weight	5,4 kg (incl. battery)

## Pressure Sensor

Sensor:	piezoresistive
Range:	0,01 to 3,5 m
Accuracy:	±0,1% FS
Protection Class:	IP68 EN60529 (NEMA 6P)
Material:	Titan
Dimensions:	105 x 17,5 mm (LxD)
Weight:	0,1 kg

## Area Velocity Sensor

Sensor:	1x velocity 1x water level
Frequency:	1 MHz
Range:	± 5,3 m/s (velocity) 0,035 to 1,3 m (water level ultrasonic)
Accuracy:	< 0,5 % FS (for v > 1 m/s) < 0,5 % FS ± 0,0025 m/s (for v < 1 m/s) 0,25% FS ±1mm (level < 0,2 m) 0,10% FS ±1mm (level > 0,2 m)
Cable Length:	10 m incl. (max. 80m)
Particle Concentration:	> 50 ppm
Material:	Epoxy
Protection Class:	IP68 EN 60529 (NEMA 6P)
Dimensions:	110 x 25 x 15 mm (LxWxH)
Weight:	1 kg (incl. 10 m cable)

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