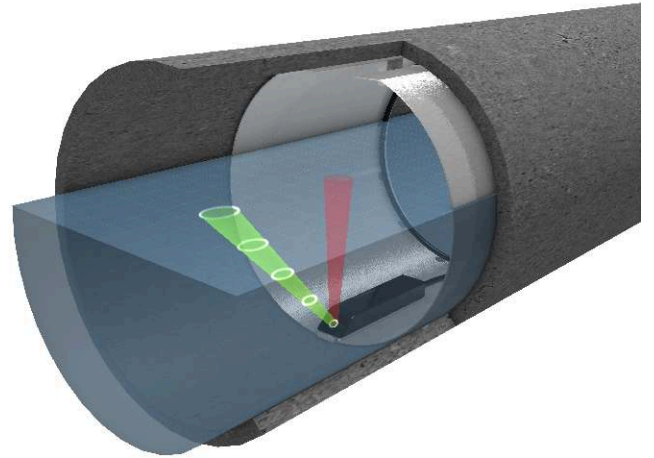


WE KNOW FLOW

**ISO 9001
CERTIFIED**

**HydroVision applies
a quality management
system according to
DIN EN ISO 9001:2000**



SYSTEM Q-Eye PSC

Pulse Spectral Correlation Technology

Multi Purpose Open Channel
Flow Measurement System

Acoustic Pulse Spectral Correlation

Q-Eye PSC Applications

The Q-Eye PSC series is an extremely versatile flow measurement system designed for continuous operation and suitable for open channels and partially filled pipes. It meets the requirements in a variety of flow applications according to Environmental Agencies and BS3680 requirements for effluent discharge. Its versatility enables flow to be measured with flumes or weirs using the depth to flow principle, or in clear channels using the velocity area principle.

Versatility is further enhanced by options of air or immersed sensors to accommodate aggressive liquids and foaming.



Specifically designed for:

- Wastewater Treatment Plant Influent and Effluent Monitoring
- CSO and Stormwater Monitoring
- Industrial Discharge and Process Control
- Industrial Surveillance Programs
- User Discharge Billing
- WWTP Capacity Planning and Control
- Remote Telemetry Data Collection
- etc.



Q-Eye PSC Features

- State-of-the-art Pulse Spectral Correlation Doppler sensor reads mean velocity directly from the flow profile using up to 22 scan cells (Q-Eye PSC PRO).
- High accuracy water depth sensors, hydrostatic pressure, submerged ultrasonic, air ultrasonic, bubbler, etc.
- Battery-backed removable Compact Flash (up to 2 GB)
- LCD Display, 4 lines, 20 characters
- 5 button, easy keypad
- Universal power supply 100-240 V_{AC} or 12 V_{DC}
- Up to 8 analog and 4 digital inputs
- Up to 4 analog, 2 digital and 2 relay outputs
- Data transmission and programming with USB host device controller, optional Modem/Ethernet communications
- Programming with FlashCard and keypad
- Multiple sensor and channel monitoring capabilities (1 monitoring point with up to 4 velocity sensors or 2 monitoring points with 1 velocity sensor per channel)
- Additional sensor inputs (e.g. water quality etc.)
- User-friendly programming and resident flow equations
- Flexible pipe size from 200 mm (8 in.)
- Easy installation
- Can be adopted to special flow applications
- Optional ATEX Ex-Approvals



Accurate Flow without Calibration

Q-Eye PSC is a major improvement in open channel flow measurement. This compact system uses HydroVision's proven Acoustic Pulse-Spectral-Correlation Technology. The system is designed to measure both, the water level and the velocity in a single transducer assembly. Q-Eye PSC directly reads mean velocity with superior accuracy, using up to 10 scan cells. Gone is the time wasted in figuring roughness factors and velocity corrections. A sub-merged ultrasonic level sensor is combined in the velocity sensor. Alternatively, an air ultrasonic or a bubbler depth sensor can be used, from surcharged conditions to completely dry.

Easy Service

No need to send a Q-Eye PSC back to the **factory!** Interchangeable circuit boards may be serviced right in the field. Field crews don't need to carry along an array of tools. A screwdriver is all that's needed.

Features

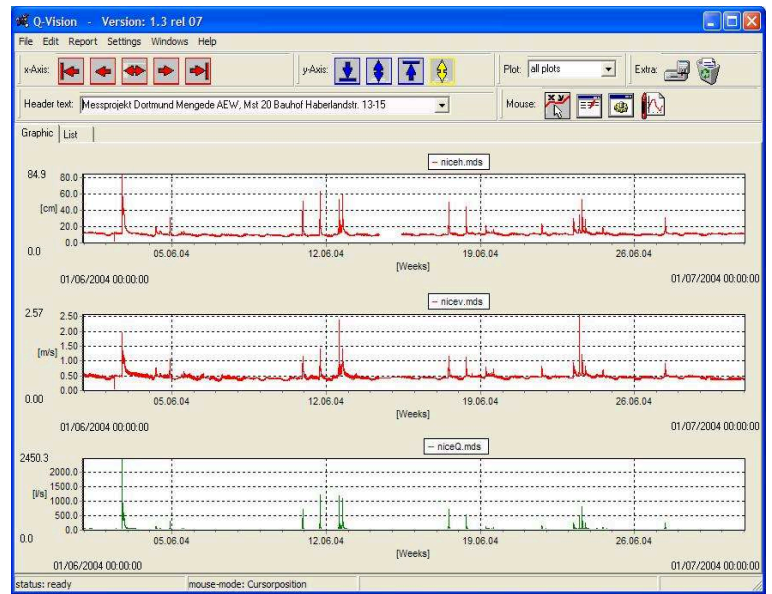
Q-Vision is a software system that integrates setting up and automated collection, reporting, viewing and analysis of data from sanitary sewers, combined sewer overflows, storm sewers, rainfall gauges, water quality samplers, and pump stations.

Q-Vision is an easy-to-use program designed to operate under a variety of hardware and software configurations. The software package operates as a complete data acquisition and analysis system in the stand alone mode, or as a work station in a network environment. The software operates on an IBM-PC or compatible and also on a hand-held Personal Digital Assistant (PDA).

- Set-up module for configuration, operation and data collection from individual sites and system monitors.
- Analysis module for graphical and numerical representation and evaluation/analysis.
- Representation of up to 3 individual plots with additional graphical super-positioning.
- Representation in different dimensions and time series with distinctive y-axis.
- Span set-up and scatter plot analysis for data QA/QC and editing possibilities.
- Zoom and cursor positioning functions.
- Multiple equation flow calculations with different channel shape and sizes.
- Complete statistical calculations (min., Max., average and total flows std. dev.), including mass balancing (inflows, outflows, etc.)
- Export of data as ASCII and csv-files for other 3rd-party software (e.g. hydraulic models, etc.)
- Import of rainfall data from any rain logger.

Reporting

Flow and sensor data can be reported in graphic and tabular form, either on-screen or hard copy, with a wide selection of printer capabilities. Reports can be prepared as standard tabular and graphic reports and outputs include daily, weekly, monthly or yearly reports and statistical functions for min., max., mean and totals including standard deviations and regression analysis. Data can also be output in ASCII and cvs format.



Flow Calculations

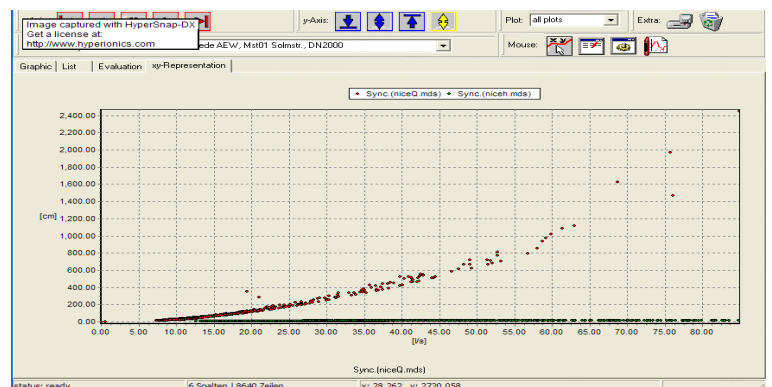
The software incorporates several flow equations including Prandtl Colebrook, Continuity, and custom cross-sections (for non-standard pipe sizes, irregular channel sizes), and silt levels.

Scatter graphs

On-screen graphics allows the user to determine the accuracy of the depth and velocity data and perform complete QA/QC on the flow data and determine anomalous conditions.

Sewer Flow Analysis

Composite and comparative graphs and tables allow the user to determine trends, analyze net flows for I/I analysis, billing networks, pipe capacities and mass balancing.



TYPE: Q-EYE PSC
LCD DISPLAY: Datalogger, stationary, AC or DC-powered
KEYPAD: 4 Lines, 20 characters, alphanumeric
MEMORY CAPACITY: 5 Buttons
LOGGING INTERVALS: up to 2 Gbytes, removable Compact Flash
MEMORY LIFE: 1,2,5,10,15,30,60 mins., programmable
POWER: >5 years, typical (@5min. intervals, depth and velocity)
CLOCK: 100 - 240 V_{AC} (47-63 Hz), or 12 V_{DC}
Real Time Clock, battery buffered

TEMPERATURE RANGE: Q-Eye PSC: -20°C to +70°C (-4°F to + 160°F)
Q-EYE SIZE: W=26.5 cm (10.4"), H=24.1 cm (9.5"), 10.4 cm (4.1")
WEIGHT: 8,2 kg (18lbs)
MATERIALS: Housing: Aluminium
Pulse-Doppler: Polyurethane, stainless steel, Teflon™
SENSOR TYPES: Pulse Doppler (u/s depth and mean velocity)
Hydrostatic (depth only)
PROTECTION: IP65 (NEMA 4)
APPROVALS: ATEX (optional)

PERFORMANCE:

DEPTH
Range: 0 to 3.5 m H₂O, (0 to 11.55 ft) for hydrostatic type (other ranges optional)
0.04 to 1.3 m, (0.13 to 4.3ft) for submerged ultrasonic type
Accuracy: <+/-0.25% full scale
Over Pressure: 4 x for range above 3.5 m H₂O (10 ft.)

VELOCITY
Type: Ultrasonic Pulse Doppler with up to 10 scan cells
Sensor type: Double -1.04 MHz piezo-crystal
Range: -5.3 to +5.3 m/s (-17 to +17 fps), bi-directional
Minimum depth: 4 cm (1.25")
Stability: 0.005m/s (0.015fps)
Accuracy: < +/-1% of mean velocity reading
Cable Length: 10 m (30 ft) standard, other lengths optional (max. 60 m (180 ft))

INPUTS: Up to 8 analog, 0/4 - 20 mA (galvanically isolated) or 0 - 1/5 V
Up to 4 digital (TTL-Level, 5 Volt)
OUTPUTS: Up to 4 analog, 0/4 - 20 mA (galvanically isolated) or 0 - 1/5 V
2 digital, open collector max. 40 VDC - 250 mA
2 relays (250 VAC/1A or 60 VDC/0.5A)

SOFTWARE Q-VISION:
Physical: CD-Rom
Compatibility: Microsoft WindowsXP, 2000, NT
Hardware required: IBM compatible
File Compatibility: ASCII



Gewerbestr. 61A
87600 Kaufbeuren
Germany

Phone: +49 83 41 966-2180
Fax: +49 83 41 966-6030
E-Mail: info@hydrovision.de
<http://www.hydrovision.de>

Represented by:

