



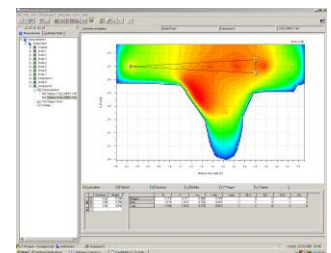
Software Q 3.0

Acquisition, Evaluation and Management of Discharge Data

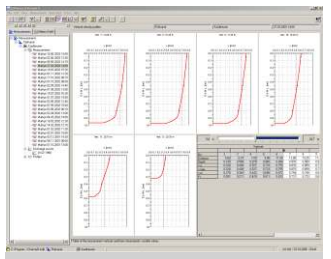
Key Features:

- Evaluation of Flow Measurements according to ISO 748
- Relational database management system
- Online-Registration of measuring values

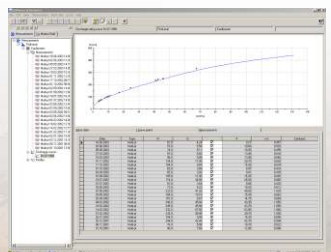
Software Q 3.0



Isotach



Velocity Distribution in the Verticals



level-flow relation



Installation of flowmeter



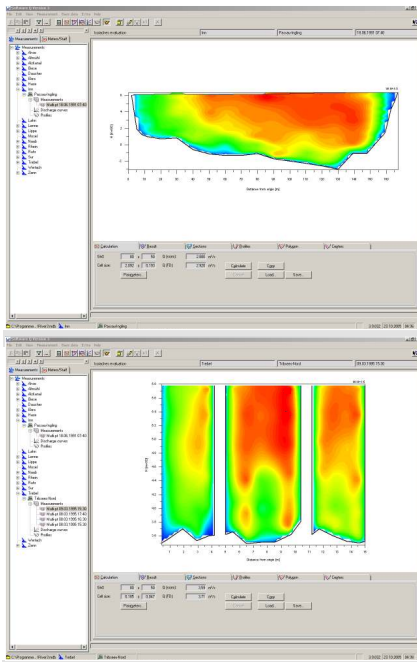
Measurement with current meter type SEBA F1



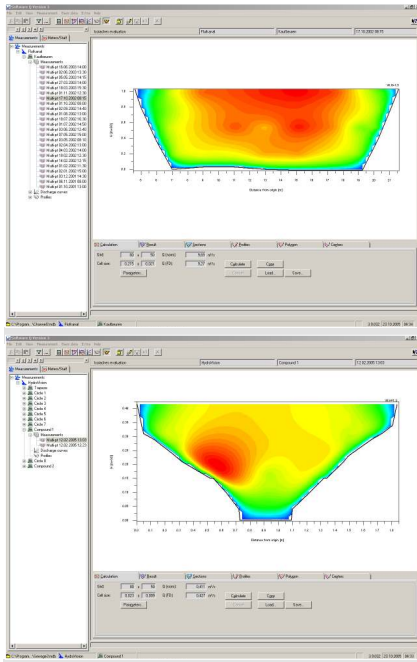
Application with AquaProfiler™

Velocity-Area Method

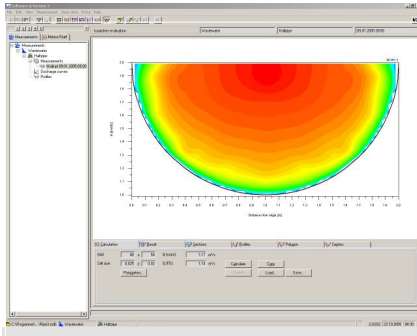
River



Open Channel

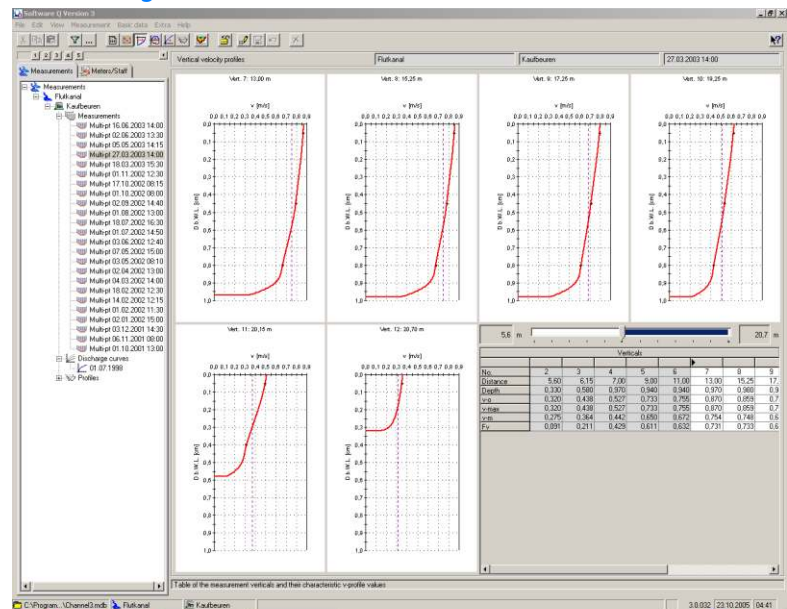


Sewer Pipe

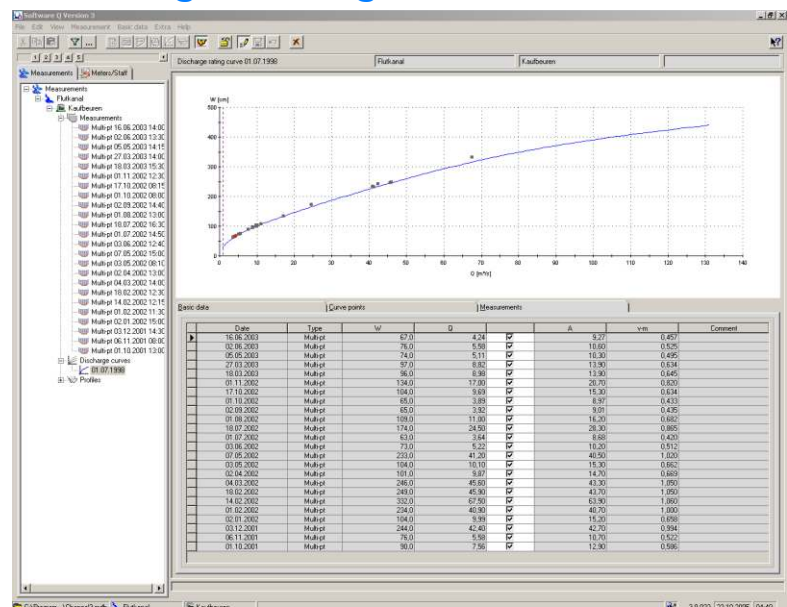


The principle of this method consists of measuring velocity and cross-sectional area. A measuring site is chosen conforming to the specified requirements. The width, depending on its magnitude, is measured either by tape or by some other surveying method and the depth is measured at a number of points across the width, sufficient to determine the shape and area of the cross-section. Velocity observations are made at each vertical preferably at the same time as measurement of depth, especially in case of unstable beds. They are made by anyone of the standard methods using velocity meters. The discharge is computed arithmetically by adding the products of the velocity and corresponding area for a series of observations in a cross-section. Based on the velocity-distribution curves of the verticals, a velocity-distribution diagram for the cross-section is prepared showing lines of equal velocity. Specific regressions in the discharge-rating-curve will be drawn up automatically.

Velocity Distributions in the Verticals



Discharge-Rating-Curve



Supported Methods

One Point Method

Velocity observations shall be made on each vertical by exposing the velocity-meter at 0.6 of the depth below the surface. The value observed is taken as the mean velocity in the vertical.

Two-Point Method:

Velocity observations shall be made at each vertical by exposing the velocity-meter at 0.2 and 0.8 of the depth below the surface. The average of the two values is taken as the mean velocity in the vertical.

Multi-Point Method:

Using this method, the values of the velocity are obtained from observations at a number of points on each vertical between the surface of the water and the bed of the channel. The velocity observations at each position are then plotted and the unit width discharge or mean velocity determined by numerical methods (Spline-Approximation).

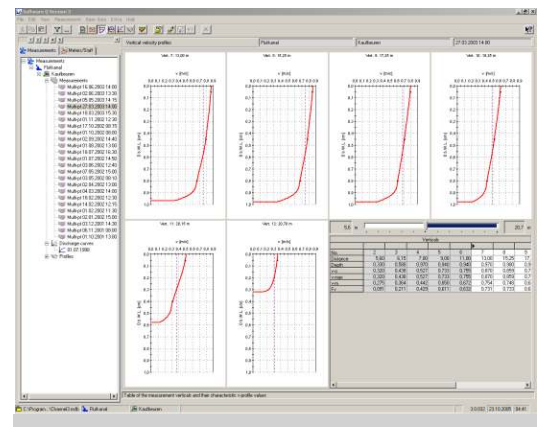
Evaluation

For each measurement a record of the measurement is made. The following information is included:

Measurement Record		Type of measurement	Edited by	Page
Gauging station		Multi-point	HydroVision GmbH	1 / 5
Name: Chemnitz		Station no.: 2570104		
River km: 545.23		Measurement no.: 29.04.2005		
River gauge: 102.485		Customer area: 102.485		
Authority: VWS Bogen		Authority no.: 102.485		
Spot: Pflaß		Total discharge: Yes		
Description of site: Pflaß km 545.23		W.L. observed	start	end
		Time	09:50	10:30
		Water level	265.0	264.0
Notes				
1. Calibration meter				
Type of meter: Meter body				
Manufacturer: Sika Hydrometrie				
Type: C21				
Model no.: 47156				
Product no.: 1-43819				
Cal. meter equation no.: 1113				
Cal. meter equation: 22.17.1986				
Clear of bed calibration: 22.17.1986				
Weight: 100 kg				
Owner:				
Manufacturer:				
Model no.: 100.100				
Max. installation:				
Measuring ship:				
Duration of measurement per point: 30 s				
Condition of banks				
protected / exposed				
Condition: normal				
Gravel				
Aquatic vegetation: No				
Remarks:				
Weather				
Wind velocity: weak wind				
Wind direction: in flow direction				
Precipitation: No				
Air temperature: 21				
Water temperature: 19.5				
Search of cross section added:				
No:				
Signature:				

Measurement Record

Measurement Record		Type of measurement		Edited by		Page
Multi-point		HydroVision GmbH				2 / 2
Gauging station		Date of measurement		Number of variables / rows, variables		
Name		16.03.2020		12 / 11		
No. of measurement point	Distance from origin	Water level	Depth of water	No. of points	Remarks	
	100 m	Height above sea level	in cm			
	0	0	0	0		
	1	0	0	0		
	2	0	0	0		
	3	0	0	0		
	4	0	0	0		
	5	0	0	0		
	6	0	0	0		
	7	0	0	0		
No. of measurement point	Distance from origin	Water level	Depth of water	No. of points	Remarks	
	100 m	Height above sea level	in cm			
	0	0	0	0		
	1	0	0	0		
	2	0	0	0		
	3	0	0	0		
	4	0	0	0		
	5	0	0	0		
	6	0	0	0		
	7	0	0	0		

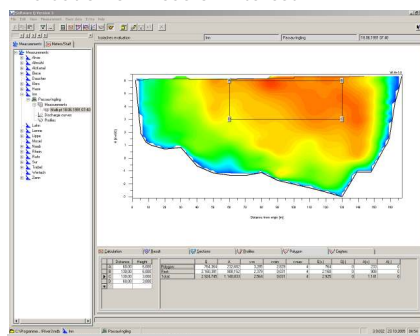


Velocity Distribution in the Verticals

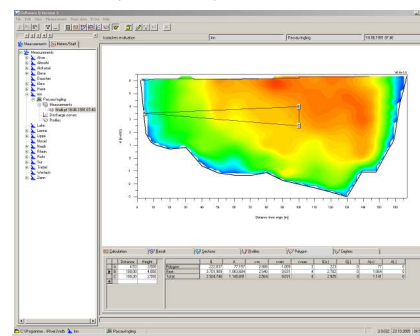
Enhanced Evaluation

With the separately available [Profi-Module](#) you can examine even complex flow conditions in much more detail than what the standard version has to offer. The flow distribution in the measuring section is calculated based on the finite-differences-algorithm.

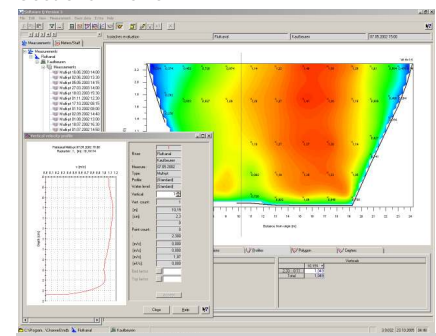
Evaluation of Areas of Interest



Hydraulic Calibrations of Sewer Pipes and Open Channel



Virtual Vertical and Horizontal Sectional Views



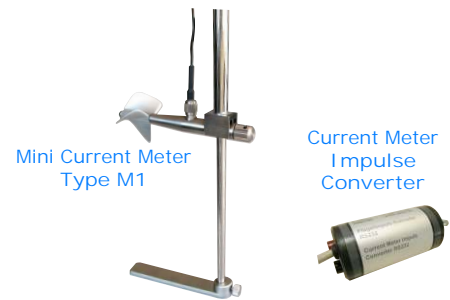
Modules, Interfaces and Upgrade-Options

Interface SEBA HDA

for data exchange between SEBA Qce running on your HDA and Software Q 3.0 installed on your PC/Laptop.

Module Current Meter

for Online-connection of current meter, direct processing and indication of the current meter impulses;
requires: impulse converter



Interface for Delphin

online-connection intelligent stabilizer tailpiece, direct processing and indication of the current meter impulses, the flow direction, depth and ground contact

Interface for Vota

direct data transfer of measured values of Vota

Interface ADC

direct data transfer of measured values of OTT-ADC

Interface AGILA

import of ADCP measurements in AGILA format

Module Export

Export of water depths in Aqua-Coup format, Export of point measurements in NVA-, XYK- and WSP file format

Q ce - mobile version

SEBA Package incl. impulse converter for the HDA

In combination with **SEBAQce** current meter measurements can be registered and visualized right on your handheld SEBA-HDA. The file-transfer of the data to your PC is done via Software Q 3.0

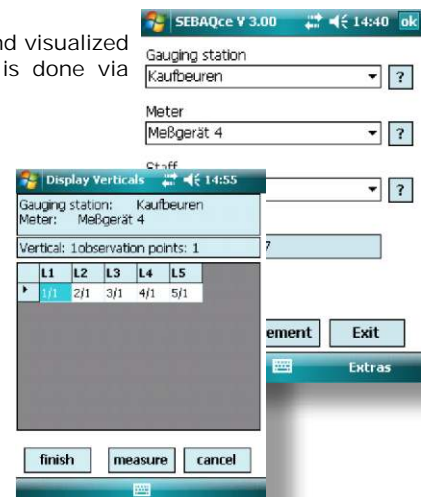


Hydrologica Digital Assistant
SEBA HDA

Our handy **HDA** combines the function of a signal-counter with the possibility to enter manual notes in one handy, easy and watertight device.

All of your measurements are logged internally in a data base. This makes it possible to continue an aborted measurement at a later time. You can also reload old measurements if necessary.

The measuring points come clearly arranged in form of a data sheet, which makes them very easy to select.



After you have finished your measurement/s, you can easily import the data into Software Q 3.0 and store it in a data base. A professional processing of the taken measurement can be done.

The right is reserved to change or amend the foregoing technical specification without prior notice.



SEBA Hydrometrie GmbH
Gewerbestr. 61a • 87600 Kaufbeuren
GERMANY
Tel.: +49 (0)8341 / 9648-0
Fax: +49 (0)8341 / 9648-48
E-Mail: info@seba.de
Internet: www.seba.de

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