



Mobile Discharge Measurement  
OTT Qliner 2  
Mobile discharge measurement  
system for rivers and channels

## OTT Qliner 2

### Mobile discharge measurement made easy

The OTT Qliner 2 measures flow (discharge) in rivers and channels. It consists of a robust, reliable, ultrasound Doppler current profiler, a Bluetooth transmitter, a boat to hold the profiler and a watertight PDA (Personal Digital Assistant).

The measurement is carried out using the classic verticals process. At the required vertical positions, the Qliner 2 measures both the vertical velocity distribution and the water depth. All measured data are transferred to the PDA via Bluetooth and processed online there using the Qliner operating software. After the measurement is complete, the discharge is available immediately.

The Qliner 2 can be operated easily on cable ways, from bridges or from the edge. The user positions the boat at the respective individual verticals and monitors/controls the measurement using the PDA. Due to the simple operation and the familiar measurement process, no special knowledge is necessary.

The "OTT Qreview" software is available for data transfer to a PC, subsequent processing of the data and export to conventional evaluation programs for flow measurements (e.g. BIBER, SoftwareQ).

Quantitative  
Hydrology

# OTT Qliner 2 – mobile discharge measurement thought out to the last detail



## PDA suitable for outdoor use

The handy PDA is robust, has a long life, and is specially designed for outdoor use. The integrated Bluetooth module and a high-performance antenna screwed on ensure smooth data traffic. The Qliner 2 operating software is pre-installed. It supports the user in planning and conducting the measurement, secures the raw data and calculates the discharge.

## Solid measuring unit, clever design

- Minimal flow resistance of the boat (catamaran)
- Sensor head, radio unit and electronics are well protected in the boat hull
- No moving parts that can be jammed during measurement
- Removable battery for convenient charging
- Secure attachment of the robust mooring line using quickpins
- Fast switching on and off with a membrane keyboard
- Easily identifiable control LEDs
- Simple positioning using the cable guide

## Further functions and advantages

- Precise results with uncomplicated, easily understood measurement execution
- Discharge calculation according to the internationally recognized standard EN ISO 748
- Automatically generated cross section profile from the measured vertical depths
- GPS or bottom tracking data not required
- No measurement problems with a moving bottom
- Noticeable time saving compared to classic current meter measurement



## Technical data

### Doppler current profiler

- Acoustic frequency: 2 MHz / 1 MHz
- Cell size:  
0.1 m ... 2 m / 0.3 m ... 4 m
- Water depth range:  
0.35 m ... 10 m / 1.20 m ... 20 m
- Maximum number of cells: 40

### Water velocity measurement

- Measuring range:  $\pm 10$  m/s
- Resolution: 1 mm/s
- Accuracy:  $\pm 1\%$  of the measured value  
 $\pm 0.5$  cm/s

### Temperature measurement

- Measuring range:  $-4$  °C ...  $40$  °C
- Resolution: 0.01 °C
- Accuracy:  $\pm 0.1$  °C

### Batteries: boat/PDA

- Nominal charge: 4 Ah / 5.2 Ah
- Voltage: 12 V DC / 3.8 V DC
- Operating time: typically  $\geq 24$  h

### Radio connection

- Type: Bluetooth Class 1
- Range: up to 150 m  
(depending on environmental conditions)

### Boat

- Material: glass fiber-reinforced plastic
- Size:  
957 mm x 482 mm x 255 mm
- Weight: 11.1 kg

### PDA

- Type: Nomad (TimbaTec)
- Size:  
175 mm\* x 100 mm x 50 mm  
\* (with antenna 275 mm)
- Weight: 620 g

### Transport case

- Size:  
1,030 mm x 580 mm x 370 mm
- Weight: 19.5 kg (empty);  
32 kg (complete)

### Protection class

- Boat above waterline: IP 67
- PDA: IP 65

### System environmental conditions

- Operating temperature:  
 $-10$  °C ...  $+60$  °C
- Storage temperature:  
 $-40$  °C ...  $+70$  °C
- Shock and vibration:  
DIN ISO 2206 / DIN ISO 2248

### "Qliner for Pocket PC" software

- Operating system: Windows Mobile
- Functions: deployment planning, data retrieval, ASCII conversion, online data collection and graphical display

### "Qreview" software for PC

- Operating system: Microsoft Windows
- Functions: data processing, storage, export