

# Universal Current Meter

WATER FLOW | VELOCITY | DISCHARGE | SURFACE WATER

## General Description

The OSS-B1 universal current meter is a field-proven instrument for **measuring the velocity of water in open and closed channels**. It is used for point measurements of flow velocities on the water surface or in vertical profiles down to the riverbed at **flow speeds of 0.025 m/s to 10 m/s**.

The OSS-B1 is made from **durable corrosion-resistant stainless steel** and it is suitable for use in the **most extreme environments**. It has been designed for lifetime trouble-free operation under normal use and when properly maintained.

The OSS-B1 can be operated

- using a wading rod
- from a boat using a single drum gauging winch/winch board
- from a bridge using a single drum gauging winch/winch board or a bridge crane
- on a cableway attached to a towing device (with suitable gauging weight)

HyQuest Solutions' current meters are modular systems: You can **tailor the perfect solution for your application** with a choice of several fans, rods, accessories, etc.

The full range of equipment needed for successful stream gauging is available from HyQuest Solutions.

Please contact us for advice!

## Applications

The OSS-B1 is especially suitable for

- Water Velocity Measurements
- Stream Gauging
- Discharge Measurement

Thanks to its low start velocity of only 0.025 m/s, the OSS-B1 shows correct results even in very slowly flowing channels.

## Main Features

- **Corrosion-resistancy:**
  - Body: polished stainless steel
  - Fans: polished stainless steel, easily grinded, re-polished and balanced
- **Precise and reliable measurements:** Encapsulated magnetic reed switch ensuring reliability and a 'clean' contact signal
- **Direct results:** Velocity displayed directly with HyQuest Solutions' counters CMCsp, PVD100 or PVD200, or with the paperless stream gauging tablet application HydroTab/CMCbt
- **Easy deployment** on standard wading rods (supplied with standard kit), bank operated winches and traversing systems

### Alternative Model for Shallow Waters

The HyQuest Solutions miniature current meter OSS-PC1 is used for point measurement of flow velocities in running waters (river riparian zone, brooks, and canals) with low water level.



## Technical Specifications

### Accuracy

+/-1 %

### Calibration

- Each current meter individually calibrated in HyQuest Solutions' calibration tank
- Compliant with ISO 3455:1976 and ISO 2537:1988
- Calibration certificate delivered with each current meter

### Fan / Propeller Specifications

(The choice of fan/propeller depends on the specifics of the site such as discharge and the geometry of the riverbed or channel. Please contact us for advice.)

Fan No.	Diam. x Pitch	Start Velocity (m/sec)	Max. Velocity (m/sec)	Component Effect
A	100 mm x 0.125 m	0.025	5	+/-45 °
1	125 mm x 0.250 m	0.025	10	+/-5 °
2	125 mm x 0.500 m	0.040	10	+/-5 °
4	80 mm x 0.125 m	0.025	4	+/-5 °

### Scope of Delivery (basic kit)

- Fan A (additional fans available, see table above)
- 3 m connecting lead, tools, oil, spare bearings, spare reed switch assembly
- Rod: 1.8 m (3 x 0.6 m), 20 mm diameter, in canvas carry bag with point and base plate
- Carry case (durable waterproof pelican case)

### Packed Dimensions & Mass (basic kit)

- Kit in carry case: 500 x 400 x 200 mm; 8 kg
- Wading rods (1.8 m in canvas carry bag): 700 x 100 mm; 2 kg

## Accessories



**Current Meter Counters** (various models): Features: waterproof enclosures, simple button controlled menus, embedded LCDs and beepers to make counts audible. Pre-set

or manually stopped sampling period. Improved accuracy due to signal conditioning. Bluetooth interfaces for use with HydroTab Stream Gauging Computer available.



### HydroTab Stream Gauging Computer:

Assembly of HydroTab software and a tablet suitable for harsh and wet environments. Used for direct water velocity measurements, or collecting, calculating, displaying and emailing full river gauging data.



### Gauging Weights

(Columbus and Nose Mounted Ground Feeler models): Protects current meter against heavy debris damage, streamlined shape reduces resistance to flowing water.



### Bridge, Boat & Cableway - Deployment and Positioning Tools:

Optional deployment tools for current meters: manual winches, winch boards, 4 and 3 wheel bridge cranes, cableways, various towing systems, gauging weights, etc.

Please ask for details!

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