

Universal Current Meter

Water Flow | Velocity | Discharge | Surface Water

General Description

The OSSB1 universal current meter is a field-proven instrument for **measuring the velocity of water in open and closed channels**. It is used for point measurement of flow velocity in vertical profiles and covers a flow velocity range from 0.025 to 10 metres per second.

The OSSB1 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 OSSB1 can be deployed:

- from a standard 20 mm diameter wading rod (rods are provided in a standard kit).
- from a boat or bridge using a single drum gauging winch (e.g. WS250) and winch board (e.g. SAN22SS).
- from a bridge using a single drum gauging winch (e.g. WS250) and bridge crane (e.g. 3WBC or 4WBC).
- from a cable way using a double drum winch or Hornet Plus system with a suitable gauging weight.

The current meters are modular systems: You can tailor the perfect solution for your application with a choice of several propellers, rods, accessories, etc. For example, with the optional tail fin assembly, directional stability during suspended measurements is controlled. The full range of equipment needed for successful stream gauging is available from KISTERS.

Please contact us for advice.

Applications

The OSSB1 is especially suitable for manual discharge measurements from low flow (i.e. wadeable streams) to high flow (i.e. flood conditions). Thanks to its low start velocity of only 0.025 m/s, the OSSB1 shows correct results even in very slow flowing channels.

Main Features

- **Corrosion resistance:**
 - Body: polished stainless steel
 - Propeller: polished stainless steel, hand-balanced
- **Precise and reliable measurements:** Encapsulated magnetic reed switch ensuring reliable 'clean' contact signals.
- **Direct results:** Velocity displayed directly with KISTERS' counter PVD200, or with the paperless stream gauging tablet application HydroTab.
- **Easy deployment** on standard wading rods (supplied with the basic kit) or single drum gauging winches.

Alternative Model for shallow waters

KISTERS' miniature current meter OSSPC1 is used for point measurement of flow velocities for discharge calculation in wadeable flowing water.



Technical Specifications

Propeller specifications

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

Propeller 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 °

Calibrated accuracy

+/-1% (stated accuracy will only be maintained when serviced and calibrated regularly)

Calibration

- Each current meter individually calibrated in accordance with ISO 3455: 2021
- Compliant with AS 3778.6.1-2022 and ISO 2537:2007
- Calibration certificate provided with each current meter

Scope of delivery (basic kit)

- In durable waterproof carrying case:**
- OSS-B1 Body assembly
 - OSS-B1 counter connecting lead
 - Body key
 - Propeller type A
 - 2x screwdrivers (short and small)
- Spare parts kit including:**
- 2x spare bearings SC058-12
 - 1x O-ring SC024-09 for contact cover
 - 1x O-ring SC024-12 for propeller carrier
- In canvas carrying bag:**
- 1x O-ring SC024-11 for body/contact cover
 - 1x O-ring SC024-14 for connecting lead
 - 1x reed switch assembly
 - 1x cleaning container
 - 1x ground post to suit a propeller
 - 1x 250 ml bottle of oil
 - Rating tables
 - 1x Wading Rod Set 1.8 m long in 3 Sections (3 x 0.6 m), Ø 20 mm

Packed Dimensions & Mass (basic kit)

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

Accessories

- Current Meter Counter: PVD200
 - Propellers: type 1, 2 and 4 (for details see above)
 - Tail Fin Stem Assembly (CMB09 1000 mm long, CMB09S 650 mm long)
- Accessories must be ordered separately. See below for further information.

Accessories



Current Meter Counters:

Features: waterproof enclosures, simple

button controlled menus, embedded LCDs and beepers to make counts audible. Preset or manually stopped sampling period. Improved accuracy due to signal conditioning. Bluetooth® interface available for use with HydroTab Stream Gauging Computer.



HydroTab Stream Gauging Application:

Fully 'paperless' system consisting of HydroTab tablet and software for water velocity measurements and calculation of total stream discharge.



Gauging Weights:

Columbus weights are available in the following sizes: CW7, CW14, CW23, CW34, CW45. Columbus weight accessories including hanger bars, securing pins and stabilizing tail assemblies are from KISTERS.



Bridge, Boat and Cableway Deployment and Positioning Accessories:

KISTERS offers e.g. manual winches, winch boards, bridge cranes, cableways, various towing systems, gauging weights, etc.

[Please ask for details.](#)

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