

# UB-Lab

the Ultrasonic Velocity Profiler

## Velocity Profiles for Laboratory Setup

### Features



- velocity profile measurement by **high accurate** pulsed coherent Doppler (UVP)
- compact and splash-proof enclosure adapted to harsh environments
- native Ethernet communication
- **ergonomic** embedded Web interface for setting up, observing instantaneous data and recording
  - control of a wide variety of external transducers
  - **high quality** measurements

### Applications



- velocity monitoring in **flume** and **pipe**
- **laboratory** studies
- turbine and marine current turbine calibration
- CFD input and validation
- reactor and tank monitoring

Our devices are available for rent, for lease and for sale.

### Contact



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## Specifications



### Measurement Performances

Sampling range	0.005 to 4 m
Number of cells	2 to 200
Cell size	4 mm to 10 cm
Velocity range	[-4 to 4] m/s (under Nyquist condition)
Velocity accuracy	0.2 to 1%
Sampling rates	up to 1 Hz
Signal processing	Coherent Doppler with phase coding
Number of configs	3
Temperature	BNC connector for PT100 probe

### Acoustics

Measurement modus	monostatic
Number of transducer connectors	2 for transducers in emission/reception
Frequency range	0.8 to 3.8MHz
Beam width	2° to 5° half angle (depending on the transducer and on the emitting frequency)
Emission voltage	30/60V

### Physical

Dimensions	5.5 x 11.3 x 38.5 cm
Weight	1.5 kg
Cable	10 m typical (up to 50 m upon request)

### Data Management

Communication	HTTP and TCP-IP protocols through Ethernet
Internal data logger	3 Go (more than 20 000 profiles)
File format	ASCII CSV (compatible with Excel, Matlab ...)
Velocity	Velocity profile data (relative to acoustic beam directions) per beam and cell
Echo	Backscattered echo RMS amplitude per beam and cell
Data Quality	Profile data quality indicator per beam and cell
Power	
Input	110-230V AC, 48V POE
Consumption	Maximum 12 VA