

# UB-lab X8

## the versatile Ultrasonic Velocity Profiler

### Velocity and Acoustic Turbidity Profiles for Laboratory Setup and Industrial Pipes

#### Features



- ▶ velocity and backscattered intensity 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
- ▶ high spatial and time resolution

#### Applications



- ▶ sediment and suspension monitoring in flume and pipe
- ▶ **laboratory** studies
- ▶ turbine and marine current turbine calibration
- ▶ **complex fluids** studies
- ▶ CFD input and validation
- ▶ industrial process optimization
- ▶ **food engineering** process control
- ▶ inline viscosity measurement
- ▶ reactor monitoring
- ▶ Particle size spectroscopy

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

#### Contact

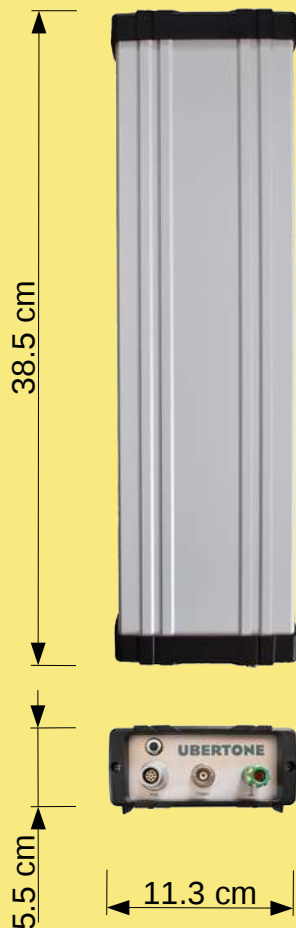


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## Technical specifications



Measurement Performances	
Sampling range	0.005 to 4 m
Number of cells	2 to 200
Cell size	0.35 mm to 10 cm
Velocity Range	[-4 to 4] m/s (under Nyquist condition)
Velocity accuracy	0.2 to 1%
Sampling rates	up to 100 Hz
Signal Processing	Coherent Doppler with phase coding
Trigger IN/OUT	yes
Temperature	1 input (4-wires-connector)
Pressure	2 inputs (4-wires-connectors)
Acoustics	
Number of transducer connectors	8 (for transducers in emission/reception)
Frequency range	0.05 to 9.4MHz (allowing particle size spectroscopy)
Beam width	2° to 5° (depending on the transducer and on the emitting frequency)
Physical	
Dimensions	5.5 x 11.3 x 38.5 cm
Weight	1.5 kg
Cable	15 m typical (up to 70 m upon request)
Data Management	
Communication	Ethernet, HTTP and TCP-IP protocols
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
Turbidity	Acoustic turbidity data per beam and cell
Data Quality	Profile data quality indicator per beam and cell
Power	
Input	110-230V AC (12V DC optional)
Consumption	Maximum 12 VA
ON/OFF LED	yes