

LISST-Horizon

FLOW-THROUGH AUTOMATED OPTICAL SCATTERING MEASUREMENT

Beam Transmission • Optical Scattering

The LISST-Horizon is a self-contained instrument for bench-top deployment in a research vessel laboratory. Plumbed to continuous underway uncontaminated seawater, it continuously measures light scattering at 60 different angles.



FEATURES

- Optical scattering from near-forward and side-scattering detectors using a 520 nm laser source
- Beam attenuation and particle size from proven LISST-200X optics, with extended pathlength for application to offshore waters
- Automated deployment in flow-through seawater systems, including clean water backgrounds, cleaning, and scattering standard measurement
- Mixers in the sample chamber to keep particles suspended during measurement
- Automated filtered sample background using attached external particle filter (0.2 μm). Raw data stored internally and offloaded via ethernet for processing with provided MATLAB software (MATLAB software license NOT included).

SPECIFICATIONS subject to change without notice

Parameters Measured

- Optical scattering at 60 angles
- Beam transmission
- Sample temperature and fluidics parameters such as pressures and flow rate

Measurement Ranges

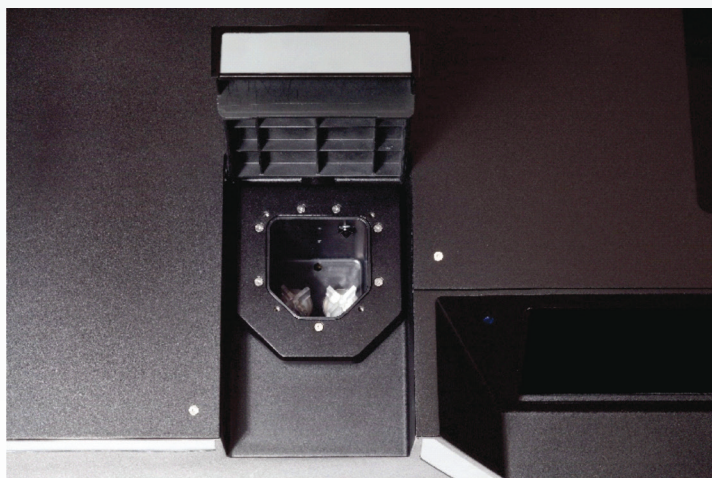
- Optical scattering from 0.1 ° to 150 ° in water; near-forward
- 0.1 ° to 15 ° on 36 log-spaced detectors and side-scattering
- 35 ° to 150 ° on 24 detectors
- Beam transmission from 0.3 m^{-1} to 15 m^{-1} (30 % to 98 %)

Mechanical and Electrical

- Dimensions [L × W × H]: 674 mm × 375 mm × 293 mm
- Weight: 19 kg
- Laser: 520 nm solid state diode laser
- External power input: 110/220 VAC converted to 24 VDC using provided power brick
- Plumbing connections using 3/8" OD (1/2" OD for drain) tubing and push-to-connect fittings
- External tanks for holding clean water background



Front view: sample cover open & touch panel



Top view: open chamber with mixers