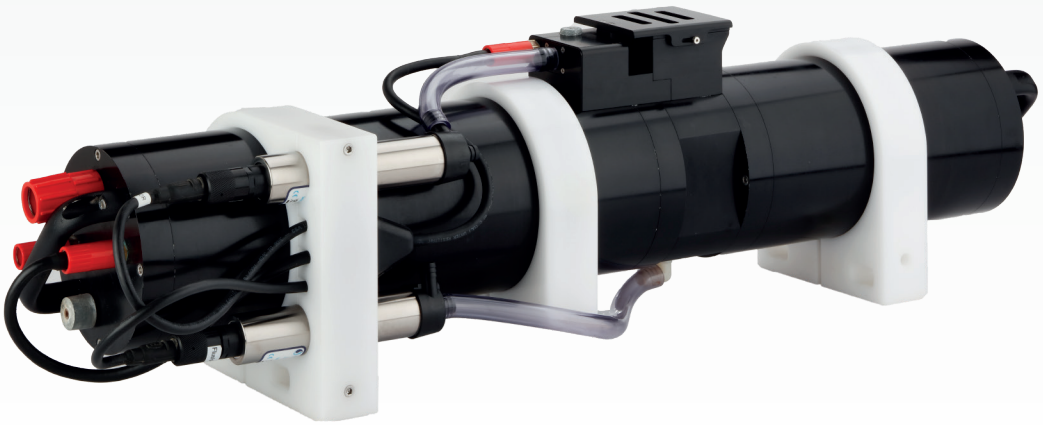
LISST-RTSSV

Real-Time Size And Settling Velocity

Particle Size • Concentration • Settling Velocity

The LISST-RTSSV measures in-situ particle size, settling velocity, and concentration. The LISST-RTSSV uses two cameras with differing magnification to image particles ranging from 3.6 microns to 4,200 microns. In-situ particle setting velocity is measured using a built-in settling column that can be sealed off from the environment. Particles and water are drawn into the chamber and allowed to settle past the cameras. Particles are counted, sized, and tracked via image processing software.

Originally developed for studying sediment plumes related to deep-sea mining operations, the LISST-RTSSV has broad applicability in other industries such as environmental monitoring, dredging, and sediment research where understanding the transport and fate of particles is critical.



SEQUOIA

Tools and Research for Particle Intelligence

FEATURES

- Dual high-resolution particle cameras
- Vertical settling velocity column
- 6,000 meter depth rating
- Pump operated settling column door designed for deep sea use
- Software included with instrument
- Accessory cable lengths available as desired
- Externally powered
- Internal data logging
- Instrument ships in rugged case

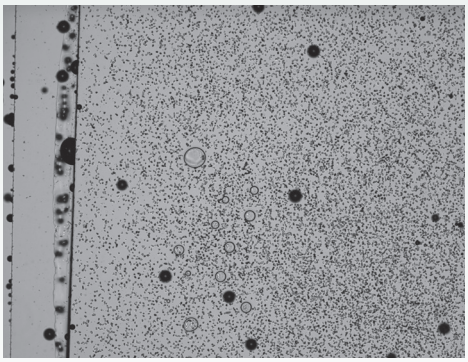
SPECIFICATIONS (subject to change without notice)

Parameters Measured

- Particle Size (3.6 µm to 4,200 µm)
- Volume Concentration
- Particle Setting Velocity (10 µm/s and 17,000 µm/s)

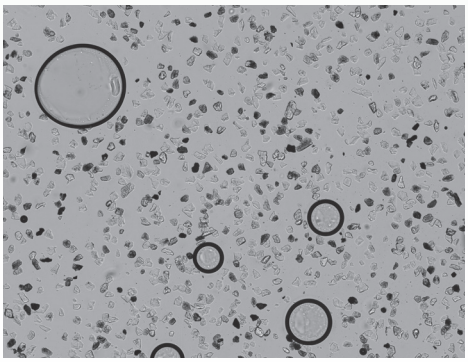
Technology

- Small Particle Camera (SPC) and Large Particle Camera (LPC) with overlapping fields of view
- Telecentric illumination



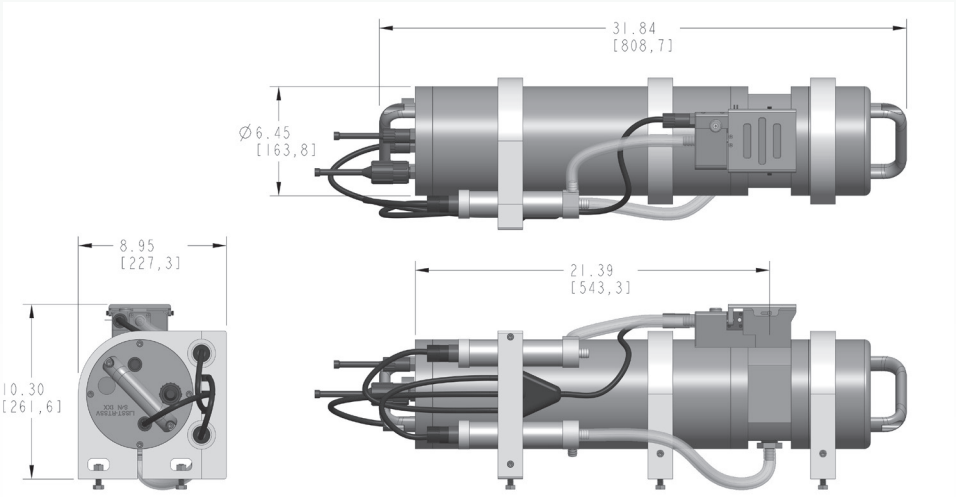
ISO Arizona Test Dust (40-80 µm) on a microscope slide placed at the camera focal planes.

Large Particle Camera (LPC) top image,
Small Particle Camera (SPC) bottom image.



Mechanical and Electrical

- Dimensions [W x H x L]: 22.9 cm x 25.4 cm x 81.3 cm (9” x 10” x 32”) including the clamps, pump and door assembly
- Weight [air / seawater]: 34.0 kg / 17.7 kg (75 lbs / 39 lbs)
- Depth rating: 6,000 m
- Material: black anodized aluminum w/sacrificial anode protection
- External power input: 12 VDC to 30 VDC
- Current drain: 1.3 A (max) @ 24 V
- Sampling Rate: 10 Image pairs per second
- Storage: 1.74 TB internal hard drive (approx. 100,000 image pairs)
- Connectors: SubConn MCBH5M, MCBH8M, DBH8M
- Temperature (operating): -3 °C to 40 °C
- Temperature (storage): -20 °C to 60 °C



Sequoia Scientific, Inc.
2700 Richards Road, Suite 107, Bellevue, WA 98005 USA
Tel +1 (855) 753-3313
email info@SequoiaSci.com
www.SequoiaSci.com

SEQUOIA
Tools and Research for Particle Intelligence