

ULS-100

Underwater Laser Scanner for Short Range Scans



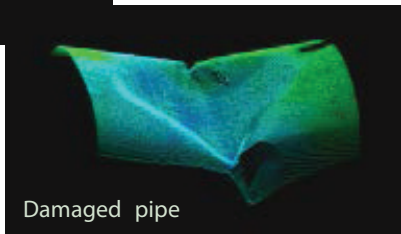
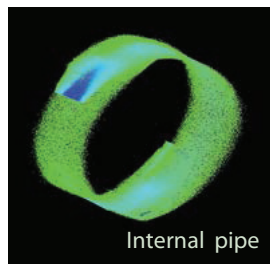
The ULS-100 Underwater Laser Scanner is a short-range measurement system that is ideal for capturing high-detail measurements in areas spanning 10cm to 1m. The system is designed for internal pipe inspection, pipeline ovality measurements and for other confined applications or when the scanner can be placed within close range of the target. The laser scanner produces very high detailed measurements capable of resolving measurements of less than 1mm and can be easily deployed by ROV or Diver.

Benefits:

- Hundreds of times higher resolution than Sonar
- Lightweight
- Compact Design
- Low Power Consumption
- Low Bandwidth Needs (RS-485 or RS-232)
- Algorithms to Deal with Silt in the Water

Applications:

- Offshore oil asset damage assessment
- Dam and Bridge damage assessment
- Mooring chain
- Nuclear inspection
- Internal pipe inspection
- Underwater pipeline ovality measurements
- Concrete piling measurements
- Ship hull inspections / ship propeller inspections
- Underwater archaeology
- Marine biology

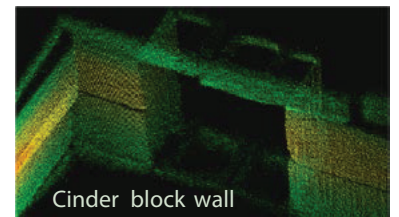


Offshore engineering

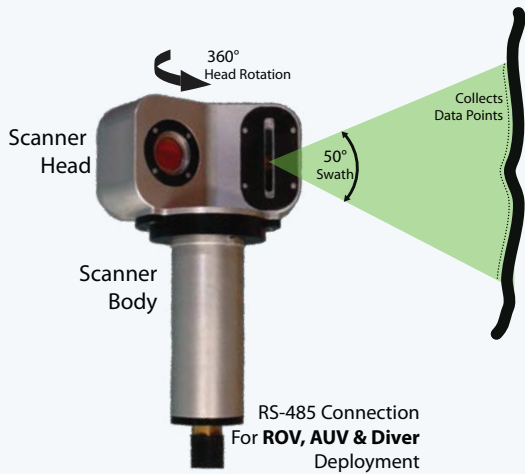
Unmatched precision



Inland inspection



DETAILS MATTER

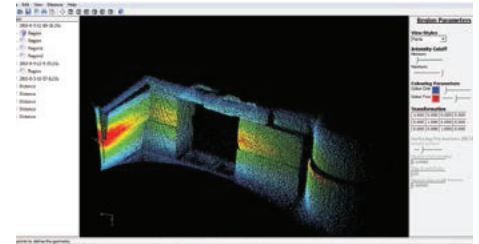


Software:

ULS-100 can be easily operated using the HBA ULScanSoft CAD package to collect and process the underwater point cloud data.

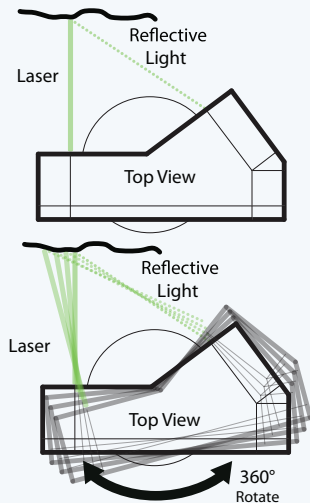
Measurements can be taken directly from the point clouds, and the point clouds can be saved as .xyz, VRML and STL, all of which are commonly used file formats for point cloud data.

The point clouds can be imported into almost any CAD for advanced data analysis and overlay comparison. An API is also available for command and data collection through your own software program.

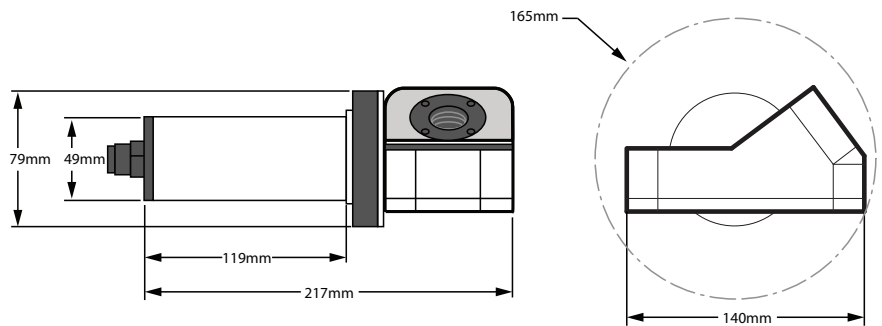


Operation:

The ULS-100 scan area is defined by the 50 degree fan beam emitted from the scanner and the rotation of the scanning head, capable of scanning a full 360 degree circumference. The ULS-100 has an effective operating range from 10cm – 1m. These scans can produce point clouds with point spacings that are less than 1 mm apart, resulting in very accurate measurements. Although scanning in the dark produces the best results, the ULS offers Ambient Light Filtration (ALF) technology, which will remove noise in the data caused by ambient light. In addition to ALF, the scanner also has algorithms to handle some silt in the water. The data capture rate is 9600 points per second, making for quick and efficient scans.



Product Specifications:



ULS-100 Short Range			
Scan Performance		Electrical	
Scan Range:	Min: 0.1m (3.9") Ideal: <1m (39.4")	Power:	12VDC to 24VDC, 1A Max
Vertical Laser Angle:	50 deg	Telemetry:	RS-485 – Standard Connection For ROV/AUV (RS-232 Available)
Vertical Resolution:	0.1042 deg	Mechanical	
Rotational Range:	360 deg	Depth Rating:	350m (1148ft)
Rotational Resolution:	0.018 deg	Weight in Water:	1kg (2.2lbs)
Laser Footprint:	1mm (0.039")	Size:	Height: 30cm (11.8") Head Length: 14cm (5.5")
Sunlight Filtering:	ALF Technology Adjustable By User	Software	
Silt Filtering:	Adjustable By User	ULScanSoft:	Included
Max Sample Rate:	9 600/Sec.	Export Data Formats:	.xyz, VRML, STL
Point Per Line:	480	Integration:	API Available