

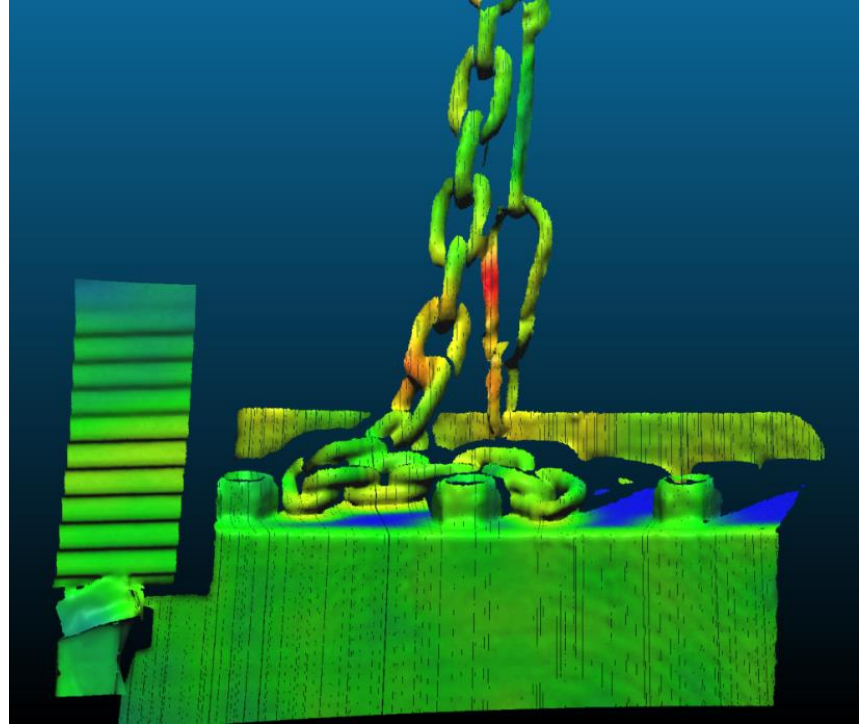
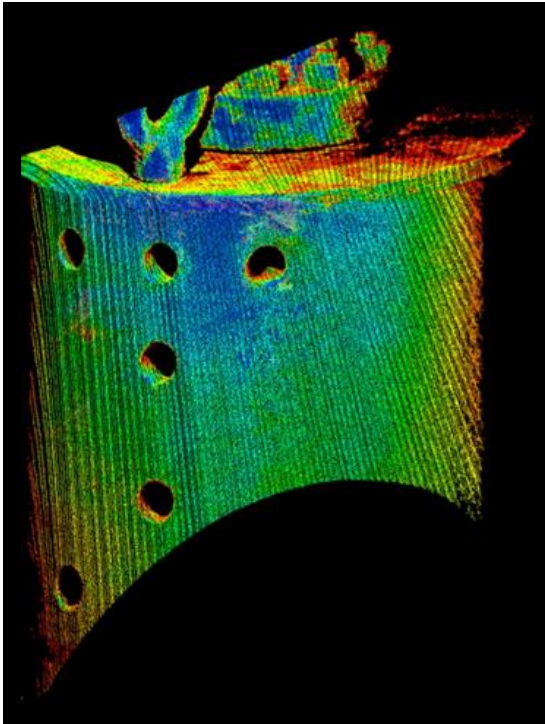


OceanTools

C-Scan

Subsea 3D Laser Imaging System

C-Scan is an *optical 3D scanning system* that may be used to generate accurate dimensional measurements from *internal* and *external* scans.



C-Scan is a laser triangulation system rotated by a high precision rotary encoder. The laser is a visible solid-state Class IIIb / 3B laser. The laser triangulation system creates a single laser line detected by a laser detector and a PC running the analysis software calculates the 3D data.

C-Scan takes measurements fifteen times a second, generates 700 discrete data points per scan and may be rotated through angles up to 360° to build up a complete 3D representation of the object being scanned. Resolution at 1.5m is typically 0.5mm.

The system output is a matrix of high precision X Y Z points. The software displays the 3D data points and enables the user to both visualise the object being scanned and to take accurate measurements within minutes of the scan.

A range of software tools in the supplied software enable the user to manipulate the data and take measurements. It is possible to export the data into a CAD package or other external software.

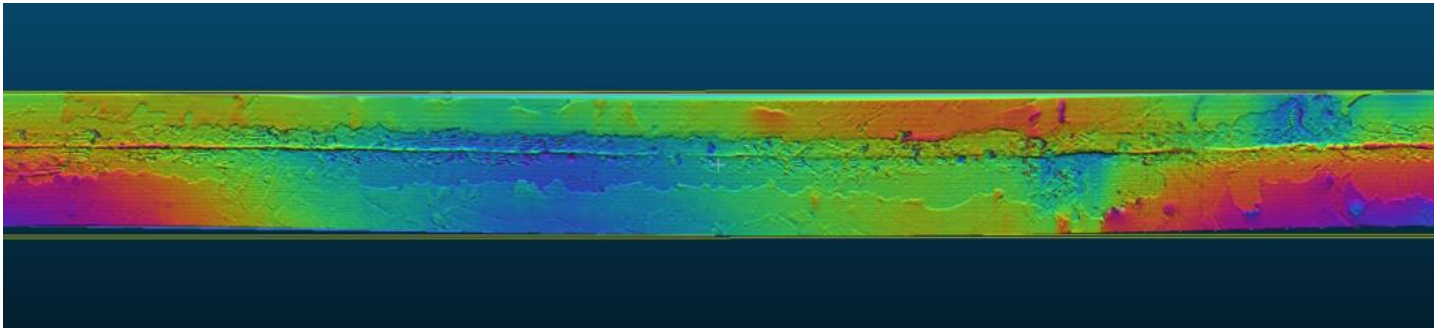
The system requires 24VDC, a video channel and either RS232 or RS485.



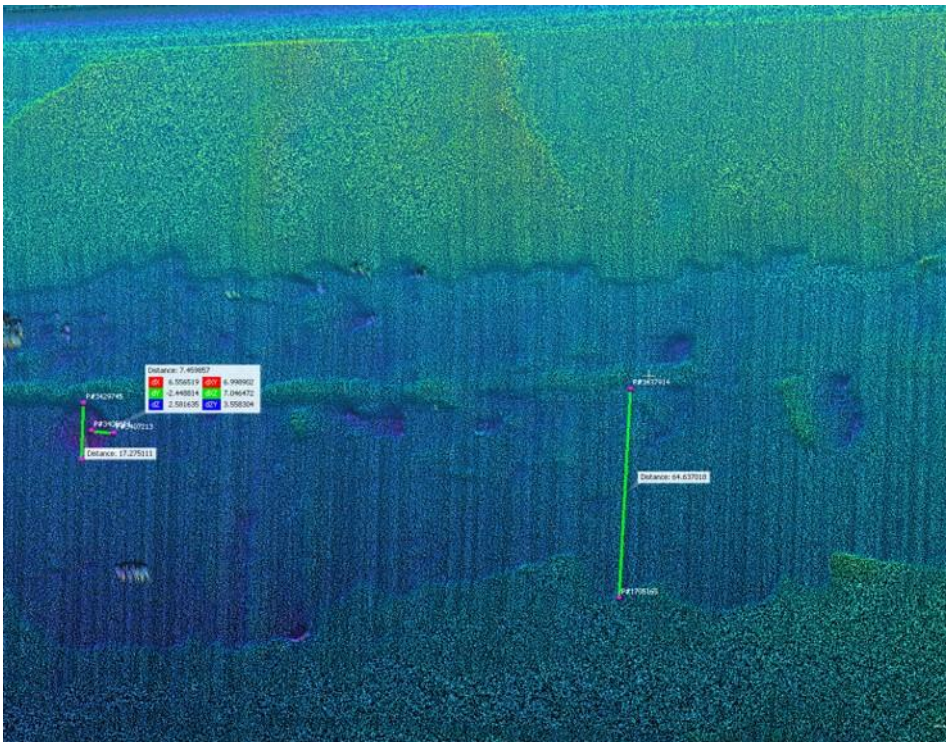


Internal and external scanning

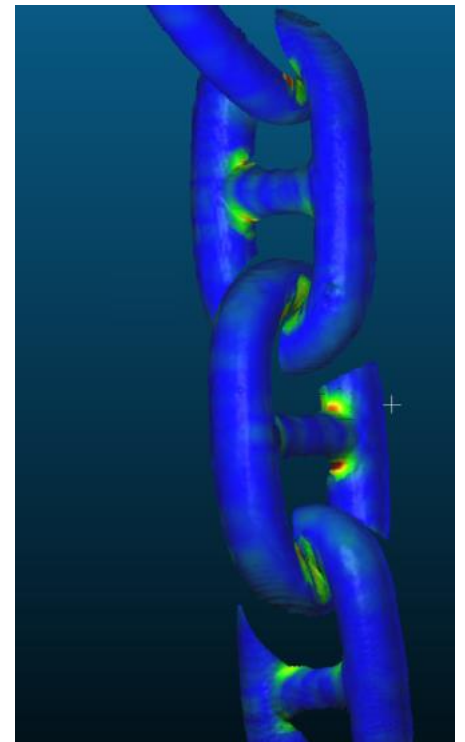
- Internal scans reveal surface details of caissons, pipes and piles
- External scans measure dimensions of flanges, anodes and other subsea structures
- 2D and 3D representations
- Precision distance measurement
- Colour contouring of height/distance
- Rapid identification of corrosion and weld defects



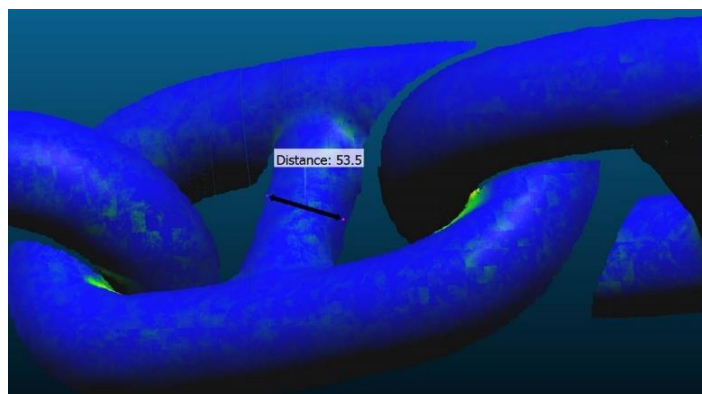
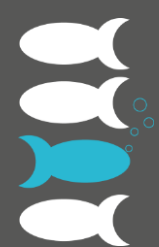
360° scan inside caisson shown two-dimensionally with corrosion colour contoured



Zoomed-in detailed measurements inside caisson

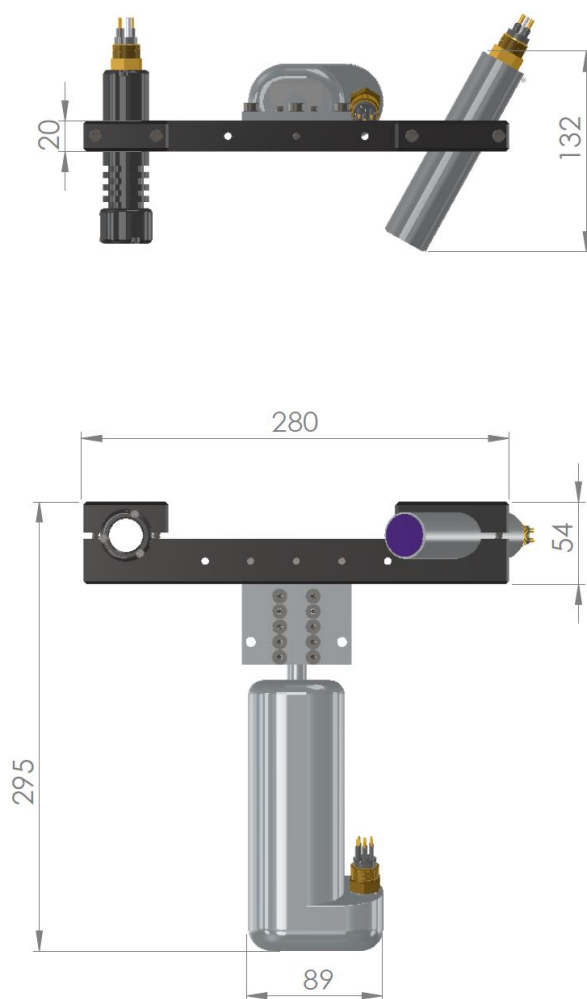


Studded anchor chain



Anchor chain photographed with caliper and 3D scan representation

Specifications	
Vertical scan angle	50°
Vertical resolution	0.071°
Maximum range	1.5m
Range resolution	0.5mm
Sample rate	15 per second
Data points per scan line	700
Data points per second	10,500
Rotational range	360°
Rotational resolution	0.02°
Ambient light filtering	User adjustable
Input voltage	24VDC
Maximum current	1A @ 24VDC
Data requirement	RS232/485 + Video
Depth rating (standard)	3000m
Weight in air	4.3kg
Weight in water	3kg



Product datasheets, GA drawings, case studies and other supporting documents are available to download from data.oceantools.co.uk
 All specifications are subject to change without notice. E&OE.

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