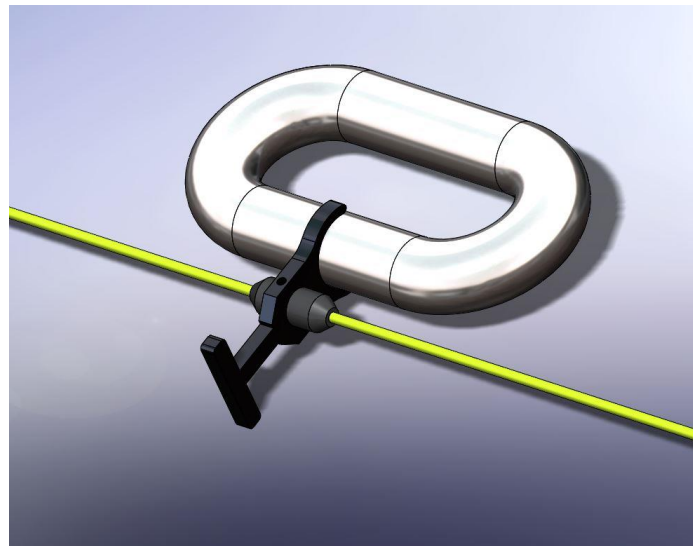


# OceanTools

## C-Moor

# Catenary Monitoring System

**C-Moor** is an innovative *catenary measurement system* designed to generate cross-sectional profiles of multiple mooring systems.



*Sensor node clamped to anchor chain*

## Overview

**C-Moor** is suitable for systems comprising chain and/or cables from 100m to 1000m in length. Eight angular readings are taken per mooring line and may be used on up to 16 mooring lines per system. A cross-sectional profile of each mooring is built up from sensor array data. Control unit functionality is subject to change and open to client requests.

### Sensor Array

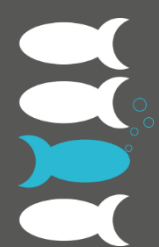
- Sensor arrays consist of 8 sensors spaced along an interconnecting cable.
- Each sensor measures the local angle of elevation of a mooring.
- Standard sensor array lengths are 100m, 250m, 500m or 1000m.
- Each sensor is clamped to the anchor chain or mooring line.
- Clamps support anchor chain, cable or combination moorings.
- Up to 16 sensor arrays (one for each mooring) are connected to the sensor hub.

### Sensor Hub

- Sensor hub provides power and communications to all sensor arrays.
- Either externally powered or by battery pack with optional solar charger.
- Sensor hub is linked to control unit via wired communications or RF link.
- Zone 1 rated components are available as an option.
- External power and wired communications allow real-time (e.g. every minute) monitoring.
- Battery power and RF link supports power saving and periodic (e.g. hourly) monitoring.

### Control Unit

- Control unit hosts graphical display software in control room or bridge.



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## C-Moor

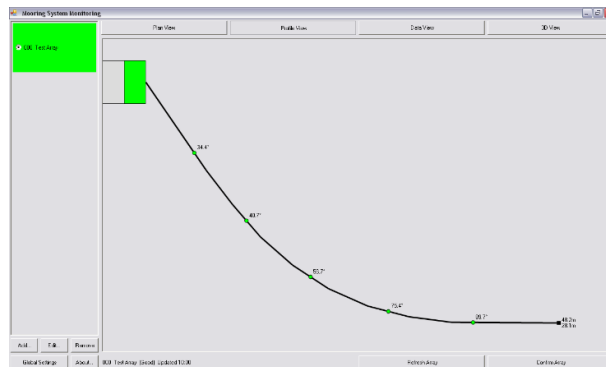
### Catenary Monitoring System

#### Control and display software offers:

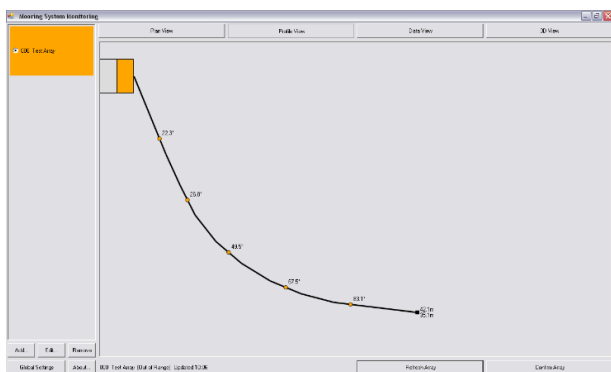
- Cross-sectional profile of one mooring
- Plan view monitoring all moorings
- Detailed diagnostic information

#### Status and warnings indicate:

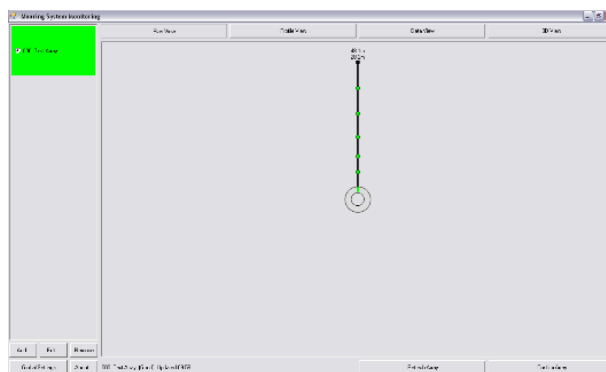
- Correctly tensioned mooring
- Under-tensioned mooring
- Over-tensioned mooring
- Sensor failure or broken array



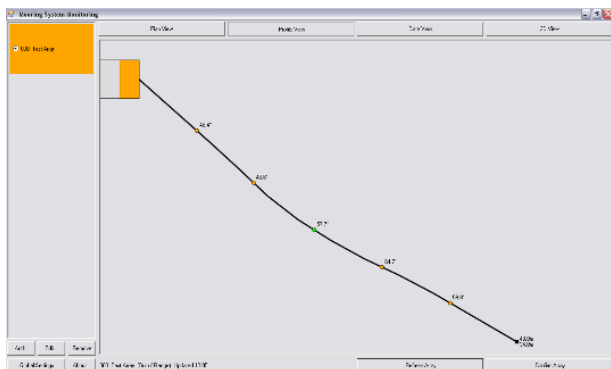
Cross section of correctly tensioned mooring



Potentially dragged or slack mooring



Plan view of correctly tensioned mooring



Potentially over-tensioned mooring

Node	Depth	Status	X	Y
001	10.0	Good	10.0	10.0
002	20.0	Good	20.0	20.0
003	30.0	Good	30.0	30.0
004	40.0	Good	40.0	40.0
005	50.0	Good	50.0	50.0

Nodal diagnostic information

## Key Features

- Full length cross-sectional mooring systems profile
- Real-time or time-lapse measurements
- Works with chain, cable or combination
- Works with multiple mooring lines
- Deployed via ROV or diver

Product datasheets, GA drawings, case studies and other supporting documents are available to download from [data.oceantools.co.uk](http://data.oceantools.co.uk)

All specifications are subject to change without notice. E&OE.

Version 11 (16.07.2018)

