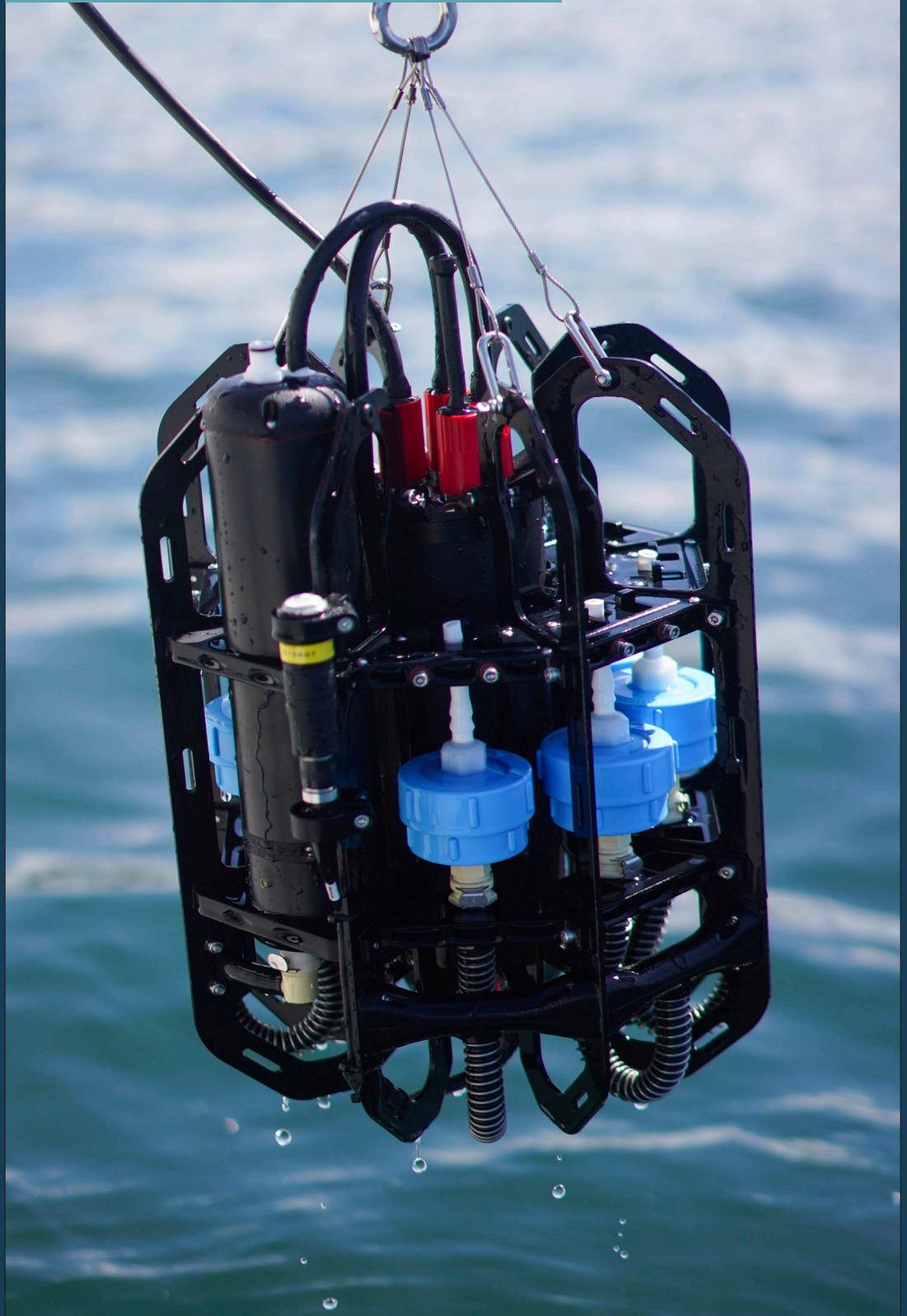


OCEAN DIAGNOSTICS INC.



# ASCENSION

Depth Profiling System



*PORTABLE. RELIABLE. EASILY DEPLOYABLE.*



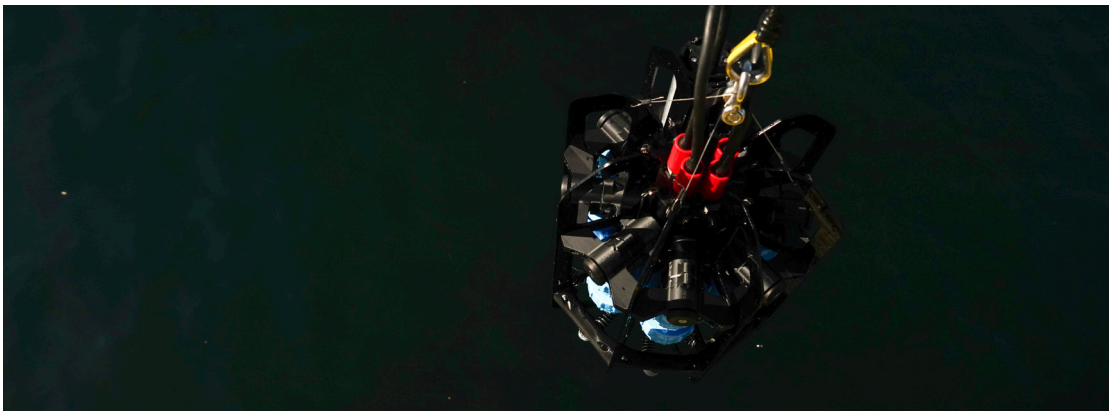
# ASCENSION

## Depth Profiling System

## Overview

Protecting our oceans against marine pollution, invasive species, overfishing and climate change requires ongoing monitoring and research efforts which has proven difficult for researchers due to the heavy, expensive, inaccessible and not-fit-for purpose equipment available, the hours of time to filter and contamination risks.

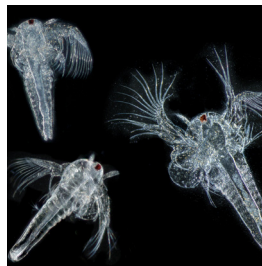
Ocean Diagnostics has developed an easy-to-use depth sampling technology called Ascension, an in-situ tethered profiling instrument designed to break down deployment barriers and allow collection of filtered particle samples through the water column down to 400-meter depths. Light, portable, and easily hand deployable from any small vessel, Ascension significantly increases your data collection capabilities and takes your research and sample collection to new levels.



## Applications



Microplastics



Plankton



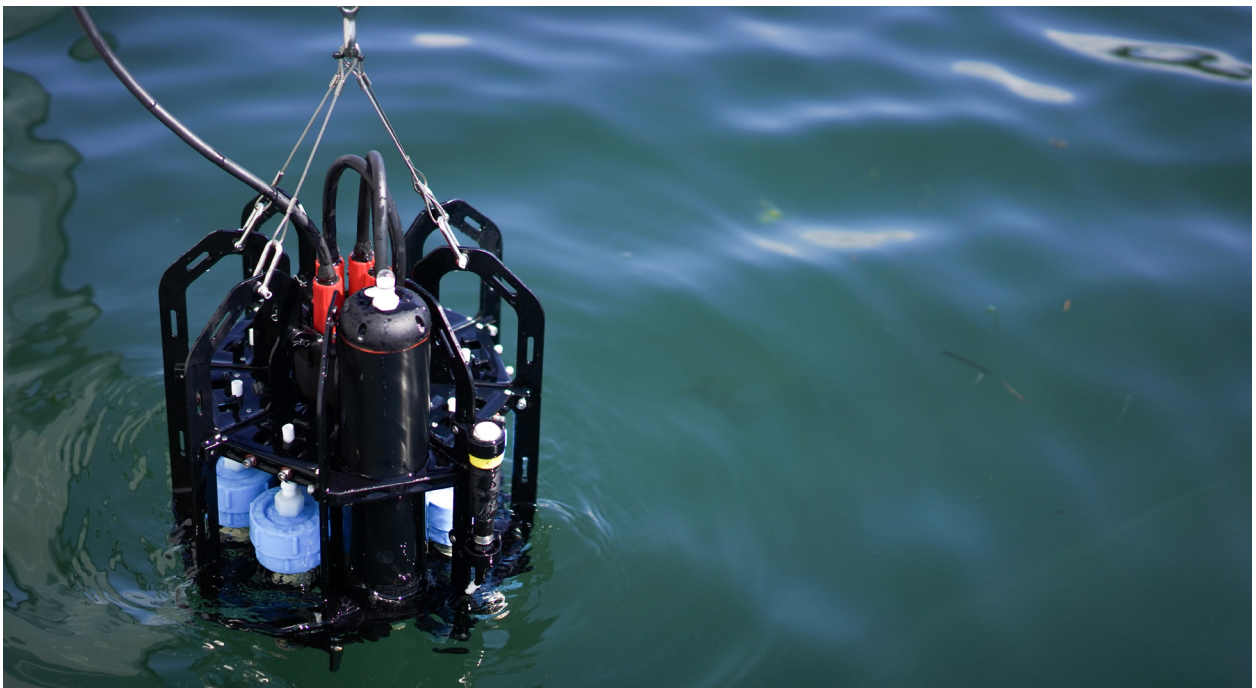
Suspended Particles



Environmental DNA

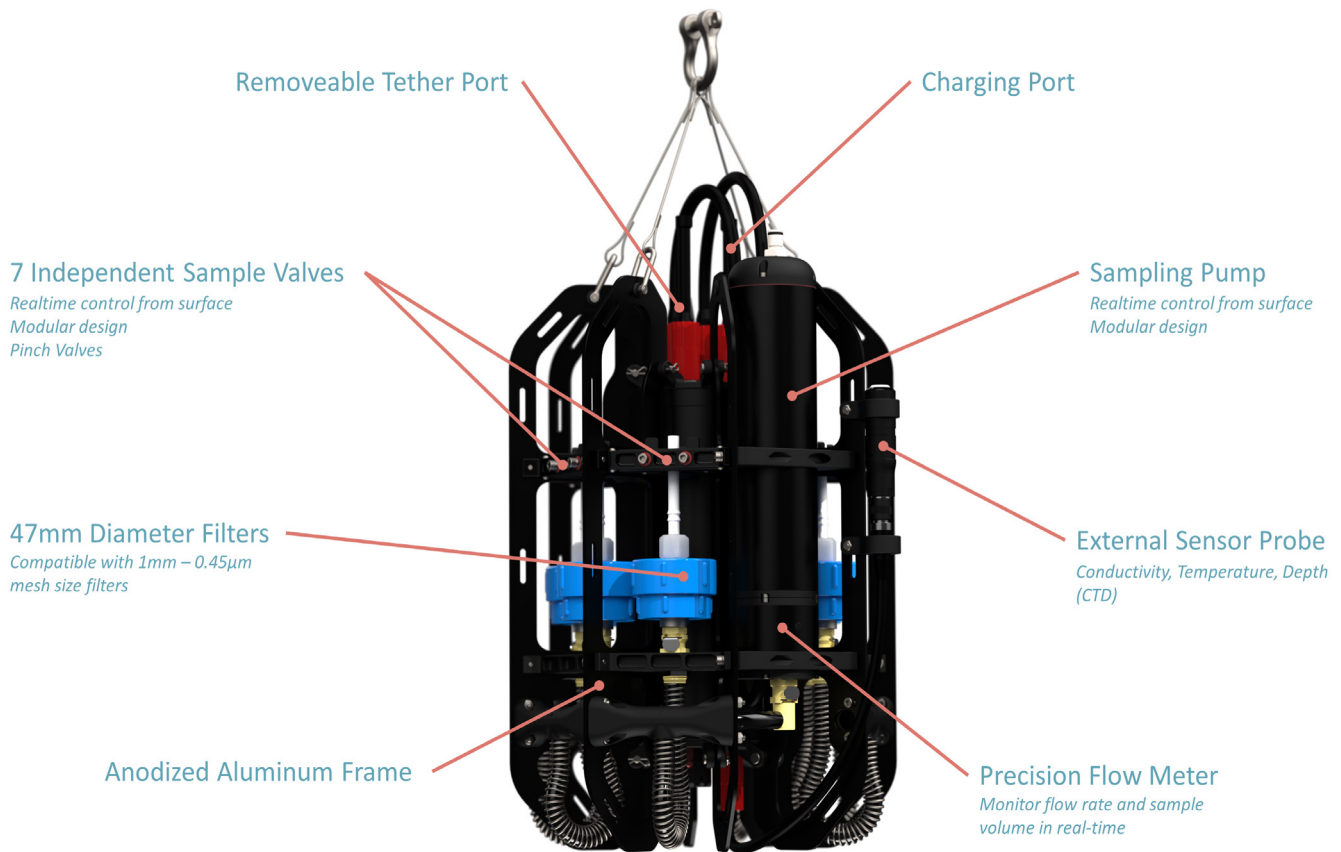
# Features

- Minimize end-user handling and reduce potential contamination by filtering directly *in-situ*
- Rechargeable battery maximizes deployment time and minimizes battery waste
- Choose between real-time manual control or pre-program an autonomous sampling routine to collect filtered samples at pre-set times
- Maintain full user control over filtration flow rates, depth and sample selection via a real-time computer-based deployment interface
- Ascension features 7 separate controllable fluidic channels, each containing a reusable filter housing capable of accepting a wide range of 47mm diameter filters
- Intuitive interface, no coding or confusing terminal commands needed to deploy Ascension. Export deployment data into a standardized report
- Monitor depth, temperature, salinity, flow rate and total volume filtered in real-time to collect highly customizable samples
- Equipped with full CTD profiling capabilities



# ASCENSION

## Depth Profiling System



*The Ascension Control Interface provides a computer bluetooth connection to Ascension's tether spool, allowing cable-free real-time computer control of the instrument*





# Specifications

## Instrument Parameters / Ratings

- Depth Rating: 400m max
- Tether Lengths: 50m, 100m, or 200m available options

## Power Information

- Battery Capacity: 266 W-Hr. rechargeable LIPO battery
- Battery can be charged between deployments using provided balance charger
- Battery charged directly through a SubConn Connector
- Tether bluetooth module has an integrated LIPO battery, rechargeable by USB

## Sampling Information

- Ascension is compatible with 47mm diameter filters > 0.45 microns in pore size
- Up to 7 filters can be loaded per deployment
- Flow rate depends on integrated pump, filter mesh size and deployment environment (0.05-5 L/Min. typical)
- Depending on pump selection, battery provides up to 3 hours of pumping at max pump throttle

## Integrated Sensor Information

- Integrated depth sensor with +/- 15 cm resolution between 0-400 m
- Integrated temperature sensor with +/- 0.1 C accuracy
- Integrated salinity sensor ranging between 3-68 mS/cm with +/- 1 PSU
- Integrated flow meter with +/- 2% accuracy on filtered volume
- Integrated internal temperature, humidity and pressure sensors

## System Requirements

- Windows 10/11 laptop with Bluetooth capability

# ABOUT US



Ocean Diagnostics is an environmental impact company that addresses the planetary threats of plastic pollution and biodiversity loss.

Bridging the gap between scientific data collection and informed decision making, we innovate novel technologies and develop capabilities to improve microplastics and environmental DNA (eDNA) sample collection, analysis, monitoring and data visualization.



**OCEAN**  
DIAGNOSTICS

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