



DATAPOD™

BY  CLEAN EARTH
ROVERS

PRODUCT MANUAL

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PRODUCT OVERVIEW

The DataPod™ is a low-cost water quality monitoring system for near-shore monitoring applications. The DataPod™ can operate in both fresh and saltwater environments and is used for continuous sampling of surface water chemistry. All of the samples collected from the DataPod™ system are transmitted to the cloud for easy interpretation of the health of your waters.

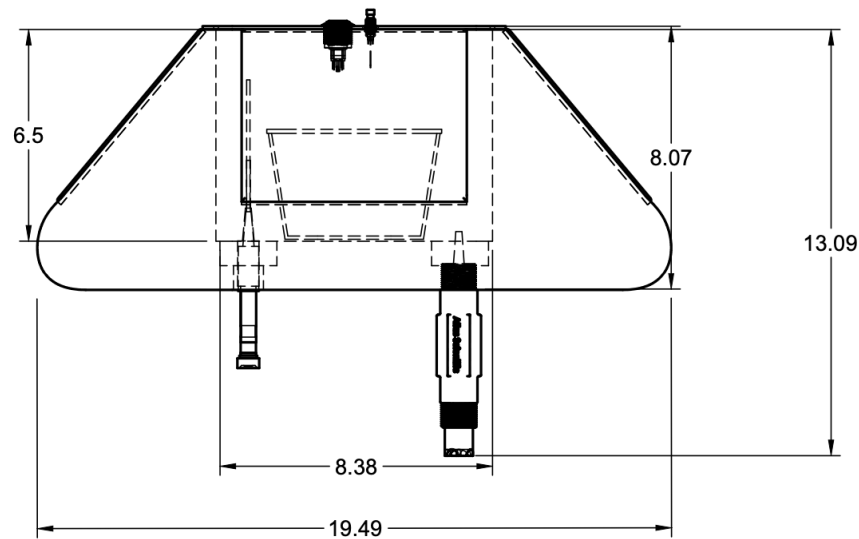
The DataPod™ operates on a low-voltage system and is equipped with 4 high-efficiency mono-crystalline solar panels. This allows for ongoing monitoring, for months at a time, in ideal operating environments. The system comes with a standard sensor suite designed to monitor metrics including:

- Dissolved Oxygen
- pH
- Temperature
- Oxygen Reducing Potential
- Conductivity

All sensors will be pre-calibrated and ready for deployment upon delivery to the customer.

On its own, the DataPod™ can operate continuously for over 7 days without a charge (at 5 mins sampling intervals). The primary power source for the DataPod™ is its solar panels. In the case where additional charging is needed, we have added a charging port, compatible with any USB-C charging plug. We recommend using a standard wall outlet and charging block (5v 2.4 amp). You can track your DataPods battery life via the Data-Dashboard home page. USB-C cables are not provided by Clean Earth Rovers.

The DataPod™ is 19.5 inches wide, 19.5 inches long and 13 inches tall (with sensors). It weighs roughly 35 lbs. and has a buoyancy water line at 6.5 inches.



PRODUCT SAFETY

The DataPod has been designed to have a number of features to make it safe for marine operators, tourists, and boaters. The Data has a bright yellow color which stands out in the water during the day. It is highly visible for oncoming boaters and tourists. Additionally, at night, the buoy has 4 LED's that light up when data is being transmitted to the cloud. The LEDs help with visibility for night boaters and act as a beacon on the water.

The DataPod™ operates on a lithium-ion battery. This battery is sealed in an electronics bay to ensure there is no outside exposure to water or risk of puncturing the battery casing. Lithium Ion batteries are highly reactive to water and can become dangerous when damaged and introduced to moisture. This reaction can create a small fire or, in severe instances, a small explosion. For this reason, DO NOT ever remove the lid of the DataPod™ unless instructed otherwise by a Clean Earth Rovers employee. The lid is O-ring-sealed and filled with moisture wicking desiccants. If you remove the lid, you run the risk of damaging the electronics, introducing moisture to the onboard computers, and breaking the air tight seal to the cavity.

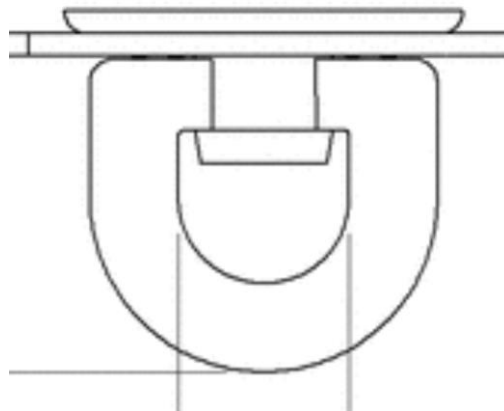
** Customers will be liable for all damages that result in the lid being removed without the instruction of a Clean Earth Rovers representative **

In the case of emergency handling, quickly remove the DataPod™ from the carabiner or rope tied off to the hasp by reaching below it. Then store the DataPod™ in a concealed location with a fire extinguisher on hand.

INSTALLATION AND SETUP

When you receive your DataPod™ unit(s), they will be delivered via a Pelican case for storage. The Pelican case will include a return label. We kindly ask that once the DataPod™ is secured in the water, that you drop it off at the closest handler location. The unit will already be charged, calibrated, and ready for deployment upon delivery. Additionally, you will be provided with a signup link. Once you register your account and create your organization, Clean Earth Rovers will assign your DataPod™ units to your organization, making the data viewable from our web-app. This will enable you to have access to all of your devices in one place and see all of your data. To prepare for field deployment, you will want to find rope or cable of your choice. You will need mooring equipment that is compatible with the DataPods™ rotating eye hasp. This hasp is mounted to its base to easily fasten a tie off line, carabiner, or anchor.

****DO NOT FLIP The DataPod™ upside down in the water. Customers will be liable to any damages to the system that result from flipping the DataPod™ upside down in the water. ****



The buoy does not come with anchor or mooring equipment. We recommend that upon delivery of the unit, and appropriate specification of mooring location, the user buys a rope, anchor and chain for direct mooring. If the user plans to tie off directly to an existing buoy, we recommend they use rope with carabiners for easy attachment and detachment. If you are deploying a new mooring or anchor, please add an additional float to your line. This ensures when the DataPod™ is removed that you do not lose your anchorage or mooring setup in the water.

We recommend a [folding grapnel anchor](#) that is roughly 10 lbs. In addition to the anchor, we recommend roughly 15 ft of chain to help ensure the anchor stays in its desired location and does not drift. The chain will ensure that it cannot be dragged along the floor by currents, weather, and boating activity.

Once charged and prepped for launch, we recommend turning the DataPod™ ON using the Power Button on the lid and validating that the 4 LED indicators light up and transmit the data. The DataPod™ power switch will click down and light up blue when turned on. From here on you are ready to launch the DataPod™. Depending on the location, we recommend taking the DataPod™ out on a small vessel, (canoe, inflatable, john boat, etc.). Large deployment vessels and equipment are not necessary for launching the DataPod™ and, in-fact may make it more difficult. The buoy should take no longer than 10 minutes to launch once at the launch location. Always wear a life preserver while launching the DataPod™. Leaning over the side of a dock, vessel, or swimming to a tie-off point can be dangerous.

Prior to placing the buoy in the water, you will want to remove the threaded cover for the industrial probe. This probe and its efficacy may be damaged if it does not have its sensor cover on at all times when out of the water. This sensor requires moisture for proper storage and care. When removing the buoy from the water, always add the threaded sensor cap back onto the DataPod™ unit filled with the provided storage solution (for long term inactivity). We recommend storing this cap with your pelican case to ensure it does not get misplaced.

OPERATING INSTRUCTIONS

Upon launching the buoy and calibrating the sensors, there will be a 3-6 month window between operations and calibration depending on whether the DataPod™ is in a saltwater or freshwater environment. For initial and ongoing calibration, calibrations will be performed by a Clean Earth Rovers representative.

All data collected from the DataPod™ is aggregated on the Clean Earth Rovers Dashboard. You will be able to see the data in different configurations. On the Dashboard, you will have the ability to share the data with other team members by adding them to your organization and setting permissions. You will also be able to set up and receive notifications and alerts to your phone about the status of your waters.

SETTING UP YOUR ACCOUNT

Only one member needs to set up their account. This member should be the admin on the account. The admin will be responsible for creating their organization, inviting team members, and adding billing information. **No other member needs to create an account!** Other members will receive an invite to join the platform from the admin to their email. From there, they can set up their account as a team member in your organization.

It is normally when you first set up your organization that no data or devices are linked to your account. Once the admin has created the organization, Clean Earth Rovers will link the DataPods™ that are included in your subscription to the organization.

For Admin use only:

1. Register your account and organization below
 - a. [Cleanearthrovers-datahub.app](https://cleanearthrovers-datahub.app)
2. Once registered, you will receive an email asking you to validate your account.
3. Once validated, you will be logged into the dashboard, navigate to the “Team” page to invite your team members and set their permissions.
4. Notify Clean Earth Rovers once your account and organization are registered.

MAINTENANCE AND CARE

If you need to take the DataPod™ out of the water and put it into storage, we recommend keeping it on its side gently leaning on the long sensor. Always make sure the black cap is filled with water and threaded onto the sensor when propping it on its side. This will ensure that the buoy is safely stored. Once the DataPod has been cleaned and stored, ensure that it is powered off. This will protect the battery and ensure that when the DataPod™ is ready to come out of storage, that it has been properly preserved. The DataPod™ is not suitable for winter conditions or frozen water. Frozen water will damage the sensors, customers should remove the equipment from the water as soon as ice forms and put the DataPod™ into storage, following the above instructions.

****Customers will be held liable for damages to the DataPod™ that occur due to exposure of ice formation or frozen conditions****

WARRANTY

The DataPod™ has a lifetime warranty since it is the sole property of Clean Earth Rovers. This warranty protects the DataPod™ against vandalism, tampering, and sabotage of the system as well as any manufacturer errors and a 12 month parts and services warranty.

The Customer waives the warranty to the DataPod™ in the event that the customer removes the top lid from the DataPod™ unit without the guidance or instruction from a Clean Earth Rovers representative. Any following damages to sensors including but not limited to will be the sole liability of the customer: dropping the DataPod™ hardware when being handled by the customer, loss of Datapod™ hardware, and leaving the DataPod™ in frozen water. The customer will be held responsible for any theft of the DataPod™, cost associated with services and repairs for the above scenarios and any other scenarios listed in bold and underlined above.

By accepting the DataPod™ hardware and starting your subscription, you agree to the warranty terms and conditions above.