

Vertical Profiler

FREQUENTLY ASKED QUESTIONS

Is a Vertical Profiler Right For Your Water Quality Monitoring?

YSI's Vertical Profiler has been providing reliable, fully automated data collection for applications such as drinking water, research, coastal, and monitoring of lakes, rivers, or bays since 2003. To ensure this is the right product for your application, we have compiled a list of frequently asked questions.

A vertical profiler is a system ([Fixed](#), [Buoyed](#), or [Pontoon-style](#)) that houses your monitoring equipment and allows a multiparameter sonde, such as a [YSI EXO](#), to be programmatically lowered and raised to provide a continuous vertical profile of the column of the water body. In addition, the vertical profiler can collect data from a wide variety of meteorological sensors such as wind speed and direction, temperature, barometric pressure, light, and precipitation. This enables users to correlate the impacts of the dynamics to the water body of interest.

Can I put a profiler on my own platform or buoy?

Yes. We do not recommend this, though, because our platforms have been specifically designed to mount the profiler and maximize its functional capabilities and access for maintenance purposes. If you choose to mount the profiler to your platform, [consult with our experts](#) and they can discuss your installation further.

Can a Profiler be installed on a dock or pier?

Yes, the Fixed Profiler configuration is designed for mounting on piers, bridges, dams, or piling.

What water quality sondes can I use with the Profiler?

The Vertical Profiler is designed to be used with the YSI multiparameter water quality [EXO Sondes](#).

What is the Data Output Format?

The data outputs as a .dat file which is a comma separate file (.csv) and is easily opened in Excel. Other formats such as .xml are supported.



Can I integrate a Profiler with SCADA?

YSI offers SCADA/Modbus data integration packages for various SCADA systems. Contact your YSI sales rep to learn about these packages in more detail.

What data transmission options are available?

YSI offers a wide variety of cellular, line-of-sight, satellite, and SCADA data transmission packages.

What is the maximum operational depth I can profile to?

A Profiler can measure to a maximum depth of 100 meters.

How does the Profiler determine the depth of the water?

The Profiler can determine depth in multiple ways – a Floating Profiler can use either a user-defined depth setting or a depth sounder while a Fixed Profiler can use a reference sonde or a [radar level sensor](#).

If the system needs to operate in an environment that is particularly cloudy or cold, can we add extra power to the system?

A power upgrade package will provide two extra solar panels, a solar regulator, and an extra battery. On average, this package provides the necessary power for customers in more demanding environments. Reducing the number of daily profiles and data transmission intervals will also extend your power reserve. Please note that the power upgrade package is only available on Pontoon Profilers. Power upgrades can be purchased individually for Fixed Profilers.

What is the minimum incremental distance between Profile measurements?

We recommend at least 0.5 meters, although the system can measure in 0.1 meter increments.

How close to the top and bottom can we reliably acquire data measurements?

One meter from the bottom and one meter from the top will allow for reliable data acquisition.

What kind of waves (i.e., sea state) can a Profiler withstand?

A Profiler can operate in rolling waves up to 1-2 meters. Ideal conditions are less than [sea state 5](#). A Profiler can survive waves up to 4 meters (up to sea state 7). YSI recommends retrieving your system when expecting severe weather.

How much maintenance does the Profiler require?

The amount of maintenance will be determined by your specific site conditions. Maintenance requirements for the Profiler itself are minimal, but the sonde and sensor payload will need careful attention. Maintenance for biofouling is determined by the environment into which it is being used. The average schedule for sonde maintenance is one to two times a month. Solar panels should be cleaned at each site visit especially in areas with heavy bird populations. Visual inspection of all cables, connectors, and belts should be conducted with every visit. (Learn more, [Extending Your Water Quality Sonde Deployment Times with Wiped Sensors](#).)

What are the mooring options?

Standard mooring options include 1-point and 2-point moorings using a 135-pound Dormor anchor, 8 feet of chain, and special mooring rope that is 1.5 times your depth.



What equipment do I need to transport my Profiler?

The Buoy and Pontoon Profiler can be moved using a standard flatbed and boat trailer, respectively. The pontoon system can be deployed using a standard boat ramp, while the buoy system will require special heavy lift equipment to place it in the water. Once in the water, the system can then be towed by a small boat to your deployment location.

Does YSI offer installation services?

YSI offers on-site installation and training assistance for all our systems. We can manage deployment of your system from unboxing to in-water deployment to data collection. Check out all the services YSI offers [here](#).

Are there any hazard warning options that can be put on the Profiler?

Yes, radar reflectors and high visibility LED beacons can be added for areas with navigable traffic.

Can other sensors be installed on the Profiler systems besides the water quality sondes?

Yes, there are a variety of standard MET: temperature, humidity sensors, wind, rain, PAR, and other specialized packages that can be added to your Profiler and integrated into your data acquisition output. [Contact our systems team](#) for customization options!

How long does the standard power supply last?

Power supply longevity is dependent on your specific deployment location, how many times you profile per day, and how frequently you acquire and transmit data. Our systems support team can advise you on the power you will need based on your requirements. We have options to increase the battery reserve and number of solar panels to match difficult environments.

Do I need to tow my system to shore in order to maintain it?

Not necessarily. Most maintenance can be done on the platform itself (Pontoon or Buoy). These platforms are very convenient and provide a comfortable space to work on.

Can I leave my system out year-round?

Unless you have ice or extremely severe storms and weather conditions, your system can be continuously deployed and maintained.

What water quality measurements can I put on the sonde?

You can measure as many parameters as are available to be installed on the EXO sonde. Please refer to the [EXO2](#) page for more details.

How long has YSI been making the Vertical Profiler?

YSI has been manufacturing the Vertical Profiler since 2003 and have deployed hundreds of profilers over the years. Paired with the market leading YSI EXO Sonde for water quality monitoring, the Vertical Profiler becomes a fully comprehensive system.

What is the warranty period?

The standard warranty is one year. Extended warranty packages are available at an additional cost.

What is the life expectancy for a Profiler? How long do they last?

Systems can be expected to last for up to 10 years with routine maintenance.



How do I get service for my unit?

Our service tech support is available weekdays via phone or email. We also offer on-site maintenance contracts and extended support packages. With proper training, most customers can perform standard maintenance on their units. Check out all our YSI Services [here](#).

Can my system be used in saltwater?

Yes, but it is possible that saltwater installations will require more routine maintenance.

Is there data visualization software available for the Profiler?

Yes, [HYPACK - A Xylem Brand](#), has created a software package called [ViPer](#) that allows you to graphically see your data in both linear and gradient displays. You can also easily sort your data by depth and embed code on a website to display the data. The website will update in real-time.

How do I know if I am a potential customer for a Profiler?

Many of our customers do not want their staff to be out in the body of water (like a reservoir) taking manual water measurements as a **safety concern**. The Profiler will allow for more frequent and accurate water quality monitoring and at various water depths, continuously collecting and providing real-time data via a desktop or on the internet. In addition, the Profiler can create **significant water treatment savings**. When deployed, the Profiler enables more regulation of the intake water of a treatment plant. In turn, this can decrease things like how much filtering needs to take place and the amount of chemicals required in the treatment process. The Profiler can also provide **overall savings**. Time savings alone can translate to an ROI of as little as two years.



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