

xylem



# EXO Ordering Guide

Multiparameter water quality sondes



xylem



# Section 1 | Sonde

The EXO Multiparameter Sonde platform includes six options for the sonde body. All sonde models feature rugged housing, titanium bulkheads, wet-mate connectors, and internal Bluetooth, with the same reliability and exceptional data quality that is synonymous with EXO.

The three sonde models are **EX01**, **EX02**, and **EX03**:



**EX01**  
[599501-xx]

4 ports
Length: 64.53 cm (25.41 in)
Diameter: 4.70 cm (1.85 in)
Weight: 1.42 kg (3.13 lbs)




**EX02**  
[599502-xx]

7 ports
Length: 70.52 cm (27.76 in)
Diameter 7.62 cm (3.00 in)
Weight: 3.60 kg (7.94 lbs)



**EX03**  
[599503-xx]

5 ports
Length: 58.61 cm (23.07 in)
Diameter 7.62 cm (3.00 in)
Weight: 2.00 kg (4.41 lbs)



EX01, EX02, and EX03 each feature an internal battery compartment for onboard sonde power using D-cell batteries for autonomous deployments. They can also be powered externally.





Each model is also available without an internal battery compartment for a smaller, lighter variation that requires external power, known as the **EXO-S Series**.

EXO-S is ideal for continuous monitoring where external power is available. They are also great for handheld sampling using the EXO Handheld Display or Kor Mobile to view live data in the field and power the sonde (See **Communication**).



**EX01<sup>S</sup>**  
[577501-xx]

4 ports

Length: 44.77 cm (17.63 in)

Diameter: 4.70 cm (1.85 in)

Weight: 0.48 kg (1.06 lbs)



**EX02<sup>S</sup>**  
[577502-xx]

7 ports

Length: 42.87 cm (16.88 in)

Diameter 7.62 cm (3.00 in)

Weight: 1.06 kg (2.34 lbs)



**EX03<sup>S</sup>**  
[577503-xx]

5 ports

Length: 42.87 cm (16.88 in)

Diameter 7.62 cm (3.00 in)

Weight: 1.06 kg (2.34 lbs)



Consider the sonde size if monitoring in confined spaces such as groundwater wells.



## Section 2 | Sensors

Selecting the right sonde model is largely determined by how many sensors you need, which is dependent on the parameters you intend to monitor. Choose the sonde model with the number of ports to accommodate your sensors.

EXO Smart Sensors can be installed in any port, retain their calibration, and are compatible with all EXO models.



Total your list of sensors below:

Sensor	Part number	Measured parameters	Additional derived parameters
<input type="checkbox"/> Conductivity/Temperature	Wiped: 599827 Non-wiped: 599870	Temperature, Conductivity	nLF Conductivity, Resistivity, Salinity, Specific Conductivity, Total Dissolved Solids, & Water Density
<input type="checkbox"/> Dissolved Oxygen	599100-01	Dissolved Oxygen (DO)	DO% Local
<input type="checkbox"/> Turbidity	599101-01	Turbidity	Total Suspended Solids
<input type="checkbox"/> pH	Guarded: 577601 Unguarded: 577602	pH	
<input type="checkbox"/> pH/ORP	Guarded: 577611 Unguarded: 577612	pH, ORP	
<input type="checkbox"/> Total Algae - Phycocyanin	599102-01	Chlorophyll, Phycocyanin	
<input type="checkbox"/> Total Algae - Phycoerythrin	599103-01	Chlorophyll, Phycoerythrin	
<input type="checkbox"/> Ammonium Ion Selective Electrode	599710	Ammonium	Ammonia
<input type="checkbox"/> Chloride Ion Selective Electrode	599711	Chloride	
<input type="checkbox"/> Nitrate Ion Selective Electrode	599709	Nitrate	
<input type="checkbox"/> NitraLED (optical nitrate)	608090	Nitrate	
<input type="checkbox"/> fDOM (fluorescent dissolved organic matter)	599104-01	fDOM	
<input type="checkbox"/> Rhodamine	577641	Rhodamine	
<input type="checkbox"/> Depth (does not occupy a port)*		Depth (10, 100, or 250 m maximum)	Absolute Pressure
<input type="checkbox"/> Central Wiper (for anti-fouling)	599090-01	none	

Total:



\*Depth is measured with a pressure transducer that is integrated in the sonde. If you require depth, be sure to select a sonde with the appropriate maximum depth rating (10, 100, or 250 meters).

### Important factors of sensor selection:

Some water quality sensors must be paired with others. Review the recommendations below, and if applicable, ensure that both are reflected in your selections:

- Conductivity/Temperature is recommended for all sensor payloads for accurate temperature compensation.
- Dissolved Oxygen (DO) must be paired with Conductivity/Temperature for accurate DO mg/L measurements.
- NitraLED must be paired with Conductivity/Temperature and Turbidity for accurate nitrate measurements.
- Ammonium ISE must be paired with pH for accurate Ammonia measurements.

Including the anti-fouling Central Wiper may affect your sensor choice.

- Conductivity/Temperature sensors are offered as “wiped”(with Wiper) or “non-wiped” (no Wiper)
- pH and pH/ORP sensors are offered as “unguarded” (with Wiper) or “guarded” (no Wiper)

Non-wiped and guarded options are recommended for use with an EX01 or EX01<sup>s</sup> or applications where the Central Wiper will not be used.

Please refer to [Section 3: Anti-Fouling](#) to learn more about the Central Wiper.



C/T (Wiped)  
[599827]



C/T (Non-wiped)  
[599870]



Dissolved Oxygen  
[599100-01]



Turbidity  
[599101-01]



pH  
[577602]



pH/ORP  
[577612]



TAL-PC  
[599102-01]



TAL-PE  
[599103-01]



Ammonium ISE  
[599710]



Chloride ISE  
[599711]



Nitrate ISE  
[599709]



NitraLED  
[608090]



fDOM  
[599104-01]



Rhodamine  
[577641]



Central Wiper  
[599090-01]



Depth  
[5xx50x-01,-02,-03]



## Section 3 | Anti-fouling

If you anticipate monitoring in high-fouling environments, especially during long-term, continuous deployments, **anti-fouling accessories are necessary to maintain high data quality.**

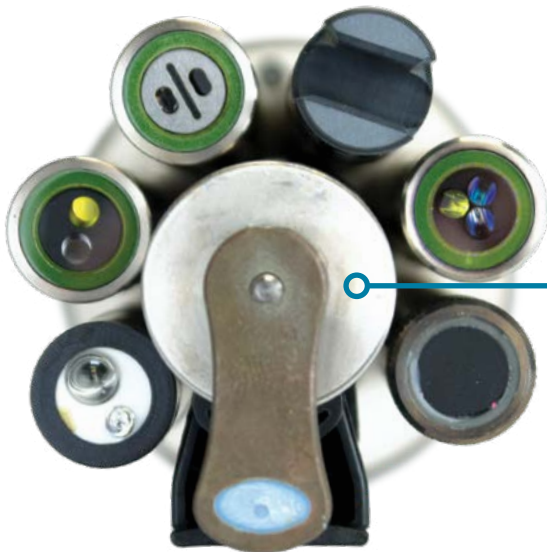


The **EXO Central Wiper** is the most powerful anti-fouling accessory and is recommended to extend the time between site maintenance and increase equipment longevity.

The wiper clears the sensor faces of biofouling, sediment, and debris for uncompromised data collection.



Central Wiper  
[599090-01]



The EX02, EX02<sup>s</sup>, EX03, and EX03<sup>s</sup> can be equipped with a Central Wiper, which occupies the center-most port.



Please note that the Central Wiper is not compatible with EX01 and EX01<sup>s</sup>.

Additional anti-fouling accessories can be used to further improve your sonde's performance during deployments.



**Copper Tape**  
[616189]

Adhesive-backed copper tape for water quality sondes and sensors that provides biofouling protection.



**C/T Screen**  
[599867]

A copper-mesh screen that blocks organisms and provides biofouling protection for the non-wiped Conductivity/Temperature sensor.



**C-Spray**  
[616290]

Non-toxic nanopolymer coating that inhibits biofouling attachment on the sonde and sensors.



**Sonde and Sensor Sleeves**  
[599663]

Heat-shrink sleeves that protect your EXO Sonde, sensors, and wiper and allows for easy removal of build-up.



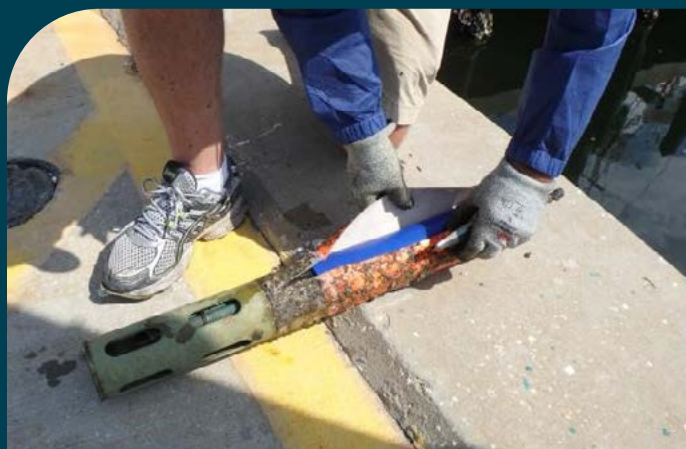
**EX01 Anti-Fouling Guard**  
[599563]

Copper-alloy EX01 sonde guard that protects sensors against biofouling.



**EX02/3 Anti-Fouling Guard**  
[599564]

Copper-alloy EX02 and EX03 sonde guard that protects sensors against biofouling.



Easily remove any fouling that attaches to the sonde and sensor sleeves by cutting off and disposing of the sleeve.



# Section 4 | Communication

All EXO Sondes are capable of discrete, spot sampling and long-term, continuous monitoring. To view live data in the field for **discrete sampling**, you can use the **EXO Handheld Display** or **EXO KorLink**, which enables Bluetooth connectivity to Android and iOS devices.



Both EXO Handheld and KorLink allow you to view live and recorded data, calibrate sensors, set up deployments, and transfer data. Also, both devices are rugged and waterproof, include GPS and an internal barometer, and can power a sonde for extended sampling. Your choice of device will depend on whether you prefer using a dedicated field handheld display or your smartphone, tablet, or laptop to view live data.

EXO Sondes can communicate via SDI-12, RS-232, RS-485, and Modbus signals to integrate with data collection platforms (DCPs) and SCADA systems for **continuous monitoring**. Signal Output Adapters (SOAs) allow the proprietary EXO Sonde signal to be converted to a signal compatible with your system.

Three types of SOAs are offered: **USB**, **DCP (SDI-12/RS-232)**, and **Modbus (RS-485)**.



**USB SOA**  
[599810]

The USB SOA allows for wired, direct connection to a computer, important for performing firmware updates in Kor Software; it is recommended to include one with every EXO Sonde.



**DCP SOA**  
[599820]

The DCP SOA is primarily used to connect EXO to a data logger. The EXO3 and EXO3<sup>s</sup> have native SDI-12, meaning a DCP SOA is not needed for SDI-12 communication.



**Modbus SOA**  
[59925]

The Modbus SOA is primarily used to integrate EXO with SCADA systems.



# Section 5 | Cables

There are two types of EXO cables: **Field Cables** and **Flying Lead Cables**.



**EXO Field Cable**  
[599040-xx]

The **field cable** connects the EXO Sonde to an EXO Handheld Display or KorLink. It has two finished ends with wet-mate connectors.

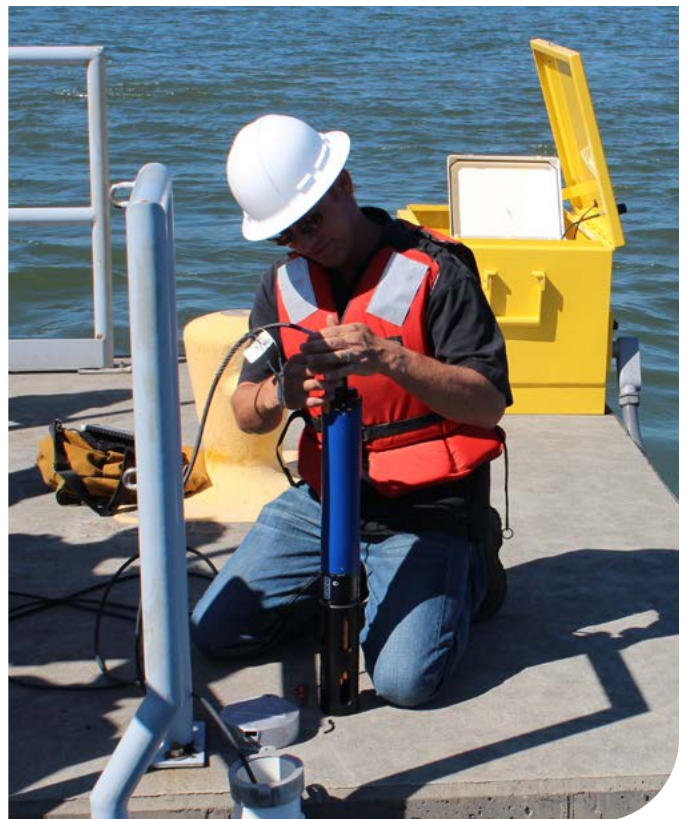
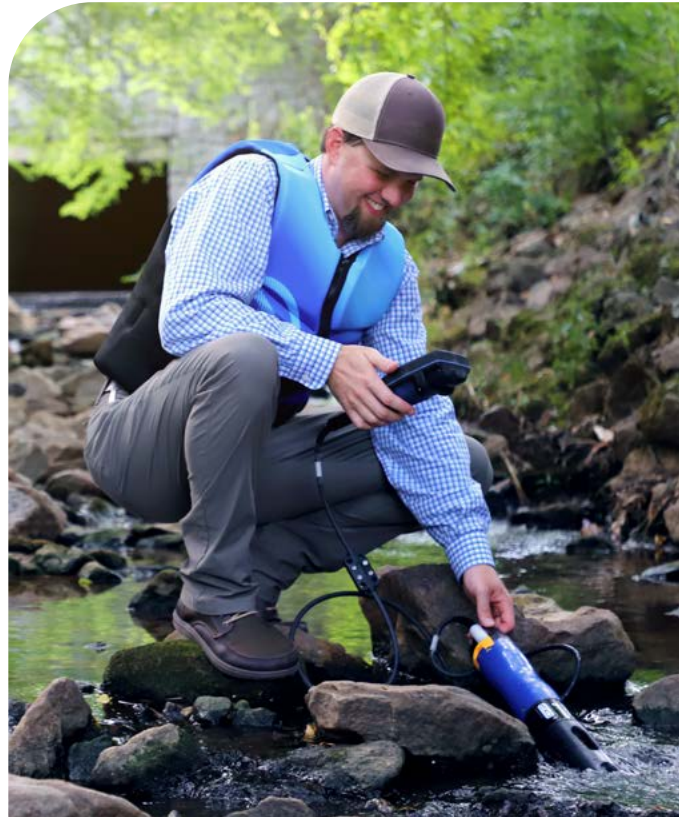
It is offered in lengths from 2 to 250 meters.



**EXO Flying Lead Cable**  
[599008-xx]

The **flying lead** cable has a connector-free end that can be used to wire an EXO Sonde to a Signal Output Adapter (SOA), or directly into a data logger, when using EXO3 or EXO3<sup>s</sup>.

It is offered in lengths from 10 to 100 meters.



## Section 6 | Other accessories



### Carrying cases

Hard-sided, wheeled carrying cases protect your sonde, sensors, and accessories during storage and transportation in the field. Available in sizes suited for the **EX01 [599020-01]** or **EX02 and EX03 [599020-02]**.



### Photosynthetically Active Radiation (PAR)

EX02 and EX02<sup>S</sup> feature an auxiliary port that allows for connection of the **PAR system [351080-xx]**, which uses Li-COR sensors to assess light attenuation, primary productivity, and photosynthesis-irradiance.



### Flow cells

Designed to allow EXO to measure a water sample without submerging the sonde, the flow cell fits over the sensors as a pumped system flushes water through the inflow, over the sensors, and through the outflow for continuously refreshed sample water. Available in sizes for the **EX01 [599080]** and **EX02 and EX03 [599201]**.



### Standards and solutions

YSI offers standard solutions for calibrating your sensors, including **Turbidity**, **pH**, **ORP**, **Conductivity**, **NitraLED**, **Nitrate ISE**, and **Ammonium ISE**. Our calibration solutions are formulated for specific use with YSI sensors, helping to maintain the accuracy and longevity of your instrumentation. The remainder of EXO sensors are calibrated with manually formulated standard solutions; see the **EXO Manual** for more information.



Visit [YSI.com](https://www.ysi.com) to order your EXO Sonde, parts, and accessories.

Please reach out if you would like more assistance in selecting your EXO Sonde and accessories.

Tel +1 937.767.7241

Email [info@ysi.com](mailto:info@ysi.com)



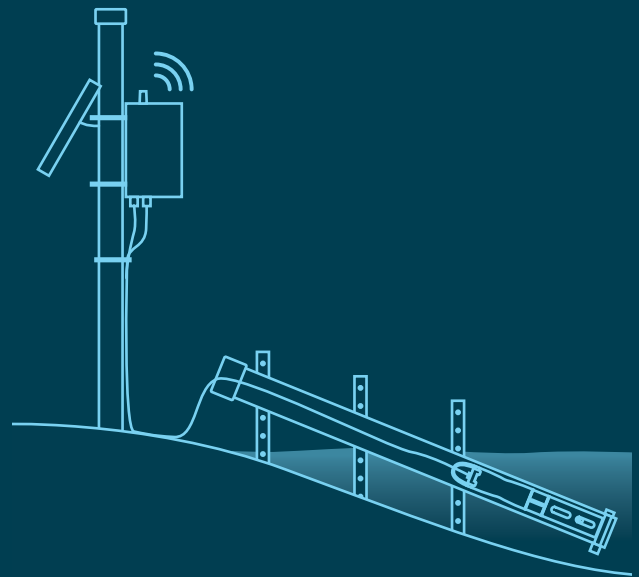
# Systems integration

Enhance your water monitoring program by combining EXO with a solution from our **Integrated Systems and Services** team.

We can help design and install customized real-time monitoring stations to meet your monitoring needs. Gather more comprehensive data with:

- Floating data buoy platforms
- TurnKey telemetry stations
- Vertical profilers
- Surface vehicles
- Underwater vehicles

Check out **HydroRIG**, an IoT gateway directly integrated with EXO Sondes for easy real-time data access through **HydroSphere**, YSI's web-based data visualization platform.



# Section 7 | EXO parts list

## Sondes

Item	Item number	Item description
EX01 Sonde	599501-00	EX01 multiparameter water quality sonde, 4 sensor ports, no depth
	599501-01	EX01 multiparameter water quality sonde, 4 sensor ports, 10 m depth
	599501-02	EX01 multiparameter water quality sonde, 4 sensor ports, 100 m depth
	599501-03	EX01 multiparameter water quality sonde, 4 sensor ports, 250 m depth
EX01 <sup>s</sup> Sonde	577501-00	EX01 <sup>s</sup> multiparameter water quality sonde, 4 sensor ports, no depth
	577501-01	EX01 <sup>s</sup> multiparameter water quality sonde, 4 sensor ports, 10 m depth
	577501-02	EX01 <sup>s</sup> multiparameter water quality sonde, 4 sensor ports, 100 m depth
	577501-03	EX01 <sup>s</sup> multiparameter water quality sonde, 4 sensor ports, 250 m depth
EX02 Sonde	599502-00	EX02 multiparameter water quality sonde, 7 sensor ports, no depth
	599502-01	EX02 multiparameter water quality sonde, 7 sensor ports, 10 m depth
	599502-02	EX02 multiparameter water quality sonde, 7 sensor ports, 100 m depth
	599502-03	EX02 multiparameter water quality sonde, 7 sensor ports, 250 m depth
EX02 <sup>s</sup> Sonde	577502-00	EX02 <sup>s</sup> multiparameter water quality sonde, 7 sensor ports, no depth
	577502-01	EX02 <sup>s</sup> multiparameter water quality sonde, 7 sensor ports, 10 m depth
	577502-02	EX02 <sup>s</sup> multiparameter water quality sonde, 7 sensor ports, 100 m depth
	577502-03	EX02 <sup>s</sup> multiparameter water quality sonde, 7 sensor ports, 250 m depth
EX03 Sonde	599503-00	EX03 multiparameter water quality sonde, 5 sensor ports, no depth
	599503-01	EX03 multiparameter water quality sonde, 5 sensor ports, 10 m depth
	599503-02	EX03 multiparameter water quality sonde, 5 sensor ports, 100 m depth
	599503-03	EX03 multiparameter water quality sonde, 5 sensor ports, 250 m depth
EX03 <sup>s</sup> Sonde	577503-00	EX03 <sup>s</sup> multiparameter water quality sonde, 5 sensor ports, no depth
	577503-01	EX03 <sup>s</sup> multiparameter water quality sonde, 5 sensor ports, 10 m depth
	577503-02	EX03 <sup>s</sup> multiparameter water quality sonde, 5 sensor ports, 100 m depth
	577503-03	EX03 <sup>s</sup> multiparameter water quality sonde, 5 sensor ports, 250 m depth

## Sensors

Item	Item number	Item description
Conductivity/Temperature (Wiped)	599827	EXO Wiped Conductivity & Temperature Smart Sensor for use with EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>
Conductivity/Temperature (Non-Wiped)	599870	EXO Non-Wiped Conductivity & Temperature Smart Sensor for use with EX01 and EX01 <sup>s</sup>
Dissolved Oxygen	599100-01	EXO Optical Dissolved Oxygen Smart Sensor
Turbidity	599101-01	EXO Turbidity Smart Sensor
pH (Guarded)	577601	EXO pH Smart Sensor (Guarded) for use with EX01 and EX01 <sup>s</sup>
pH (Unguarded)	577602	EXO pH Smart Sensor (Unguarded) for use with EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>
pH/ORP (Guarded)	577611	EXO pH & ORP Smart Sensor (Guarded) for use with EX01 and EX01 <sup>s</sup>
pH/ORP (Unguarded)	577612	EXO pH & ORP Smart Sensor (Unguarded) for use with EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>



Total Algae – Phycocyanin	599102-01	EXO Total Algae Phycocyanin Smart Sensor - Freshwater
Total Algae – Phycoerythrin (Saltwater)	599103-01	EXO Total Algae Phycoerythrin Smart Sensor - Saltwater
Ammonium Ion Selective Electrode (ISE)	599710	EXO Ammonium Smart Sensor (ISE)
Chloride Ion Selective Electrode (ISE)	599711	EXO Chloride Smart Sensor (ISE) - Shallow Freshwater Only
Nitrate Ion Selective Electrode (ISE)	599709	EXO Nitrate Smart Sensor (ISE) - Shallow Freshwater Only
NitraLED (UV Nitrate)	608090	EXO NitraLED UV Nitrate Sensor for Freshwater Environments
Fluorescent Dissolved Organic Matter (fDOM)	599104-01	EXO Fluorescent Dissolved Organic Matter Smart Sensor
Rhodamine	577641	EXO Rhodamine Smart Sensor
EXO Central Wiper	599090-01	Anti-fouling Wiper for the EXO Sondes

## Cables

Item	Item number	Item description
EXO Field Cable	599040-xx	Connects EXO Sonde to Handheld Display and KorLink (2 - 250 meters)
EXO Flying Lead Cable	599008-xx	Connects EXO Sondes to wire terminals on Signal Output Adapters, data loggers, etc. (10 - 100 meters)

## Communication accessories

Item	Item number	Item description
USB Signal Output Adapter	599810	Supports connection between an EXO Sonde and a PC/tablet via USB
DCP Signal Output Adapter	599820	Supports connection between an EXO Sonde and data loggers and telemetry systems via SDI-12 and RS-232, with USB connectivity to PCs/tablets
Modbus Signal Output Adapter	599825	Supports connection between an EXO Sonde and SCADA systems via RS-232 or RS-485, with USB connectivity to PCs/tablets
EXO Handheld Display	599960	Rugged interface for managing settings and performing calibrations with the EXO Sonde
EXO KorLink Bluetooth Adapter	577450	Bluetooth communication adapter used with a field cable to interface with an EXO Sonde through Kor desktop software or mobile application

## Anti-fouling accessories

Item	Item number	Item description
Anti-Fouling Copper Tape	616189	Copper tape for biofouling protection
EXO Anti-Fouling C/T Screen	599867	Copper probe screen
Anti-Fouling C-Spray	599825	Non-toxic biofouling inhibitor
EXO Sonde and Sensor Protective Sleeves	599663	Anti-fouling sleeves
EXO1 Anti-Fouling Guard	599563	Copper-alloy guard
EXO2/EXO3 Anti-Fouling Guard	599564	Copper-alloy guard

## Standards & solutions

Item	Item number	Item description
Turbidity Standard	608000	0 FNU Turbidity Standard
	607200	12.4 FNU Turbidity Standard
	607300	124 FNU Turbidity Standard
	607400	1010 FNU Turbidity Standard
pH Buffer	003821	pH 4 Buffer
	003822	pH 7 Buffer
	003823	pH 10 Buffer
	603824	pH Buffer, Assorted Case
Conductivity Calibrator Solution	060906	1,413 $\mu\text{S}/\text{cm}$ , Conductivity Calibrator Solution
	065270	1,000 $\mu\text{S}/\text{cm}$ Fresh Water, Conductivity Calibrator Solution
	065272	10,000 $\mu\text{S}/\text{cm}$ Brackish Water, Conductivity Calibrator Solution
	060907	1000 $\mu\text{S}/\text{cm}$ Fresh Water, Conductivity Calibrator Solution
	060911	10,000 $\mu\text{S}/\text{cm}$ Brackish Water, Conductivity Calibrator Solution
	060660	50,000 $\mu\text{S}/\text{cm}$ Sea Water, Conductivity Calibrator Solution
Ammonium Standard	003841	1 mg/L Ammonium Calibration Solution
	003843	100 mg/L Ammonium Calibration Standard
Nitrate Standard	003885	1 mg/L Nitrate Standard
	003887	100 mg/L Nitrate Standard
NitraLED Calibration Standard	608072	5 mg/L $\text{NO}_3\text{-N}$ NitraLED Calibration Standard
	608073	10 mg/L $\text{NO}_3\text{-N}$ NitraLED Calibration Standard
Zobell Solution, ORP Calibrator	061320	Zobell Solution used for calibrating ORP/Redox sensors

## Replacement caps & modules

Item	Item number	Item description
EXO Dissolved Oxygen Sensor Cap	599110	DO Sensor cap replacement kit
EXO pH Sensor Module (Guarded)	577603-01	EXO pH Sensor replacement module, guarded (user replaceable tip for 577601)
EXO pH Sensor Module (Unguarded)	577603-02	EXO pH Sensor replacement module, unguarded (user replaceable tip for 577602)
EXO pH/ORP Sensor Module (Guarded)	577613-01	EXO pH/ORP Sensor replacement module, guarded (user replaceable tip for 577611)
EXO pH/ORP Sensor Module (Unguarded)	577613-02	EXO pH/ORP Sensor replacement module, unguarded (user replaceable tip for 577612)
EXO Ammonium Module	599744-01	EXO Ammonium ISE replacement module, guarded (user replaceable tip for 599710)
EXO Nitrate Module	599743-01	EXO Nitrate ISE replacement module, guarded (user replaceable tip for 599709)
EXO Chloride Module	599745-01	EXO Chloride ISE replacement module, guarded (user replaceable tip for 599711)



## Spare parts

Item	Item number	Item description
EX01 Calibration and Storage Cup	599786	Calibration and storage cup for EX01 and EX01 <sup>s</sup>
EX02/EX03 Calibration and Storage Cup	599316	Calibration and storage cup for EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>
EX01 Guard	599666	Protects sensors without restricting flow or fluids for EX01 and EX01 <sup>s</sup>
EX02/EX03 Guard	599667	Protects smart sensors without restricting flow or fluids for EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>
EXO 4-Pin Bulkhead Connector Port Plug	599475	Seals unused sensor ports on EXO bulkhead
EXO 6-Pin Dummy Plug, Female	599665	Replacement dummy plug for EXO communication connection port
EXO 6-Pin Dummy Plug, Male	599664	Replacement dummy plug for EX02 and EX02 <sup>s</sup> auxiliary connection port
EXO Sensor Brace Kit	608609	Secures sensor payload of EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>
EXO Central Wiper Brush Kit	599673	Replacement wiper brush for EXO Central Wiper
EXO NitraLED Wiper Brush Kit	608085	Replacement wiper brush for EXO Central Wiper using NitraLED Sensor
EXO Tool Kit	599594	EXO tool kit provides essential replacement parts for maintaining EXO Sondes
EXO Sensor Tool Kit	599469	Two replacement magnetic sensor tools for EXO Sondes

## Other accessories

Item	Item number	Item description
EX01 Carrying Case	599020-01	Hard-sided, wheeled carrying case for EX01 and EX01 <sup>s</sup>
EX02/EX03 Carrying Case	599020-02	Hard-sided, wheeled carrying case for EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>
EX01 Flow Cell	599080	Flow cell for EX01 and EX01 <sup>s</sup>
EX02/EX03 Flow Cell	599201	Flow cell for EX02, EX02 <sup>s</sup> , EX03, and EX03 <sup>s</sup>
EXO PAR System	351080-xx	EXO PAR system for for EX02, EX02 <sup>s</sup>

# Xylem |'zīləm|

- 1) the tissue in plants that brings water and nutrients upward from the roots.
- 2) a leading global water solutions company.

Xylem is a leading global water solutions company dedicated to advancing sustainable impact and empowering the people who make water work every day. Xylem connects diverse capabilities and innovative technologies to provide tailored solutions across the entire water cycle. From moving, treating and measuring water to optimizing and maintaining water systems, Xylem collaborates with customers to solve their most critical challenges. Together, through partnerships with utilities, industrial manufacturers, building operators, and communities, we are building a more water-secure world.

**For more information on how Xylem can help you, visit [xylem.com](https://xylem.com).**



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YSI Incorporated  
1725 Brannum Lane  
Yellow Springs, OH 45387

Tel +1 937.767.7241  
Email [info@ysi.com](mailto:info@ysi.com)  
[YSI.com](https://ysi.com)



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