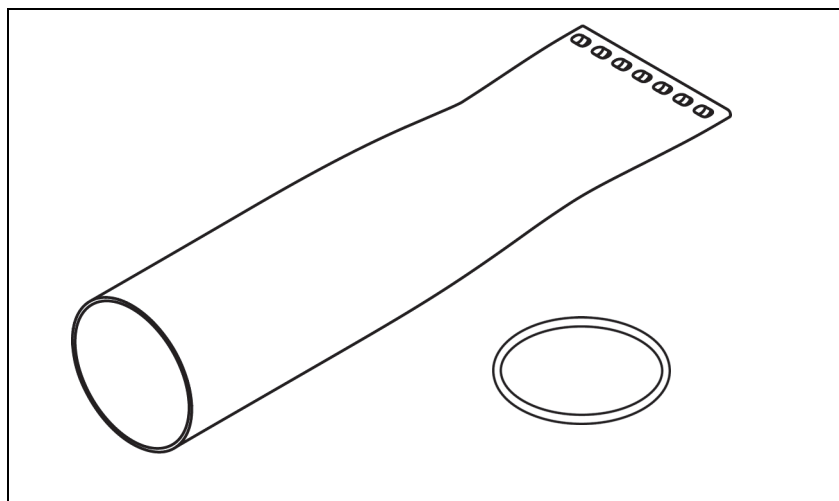


# Dissolved CO<sub>2</sub> Waterproof Sleeve Accessory

PS-3545



**WARNING:** The PS-3208 Wireless CO<sub>2</sub> Sensor is NOT a waterproof or immersible sensor. Failure to correctly test and install the sleeve could void the product warranty and damage the sensor.

Included Equipment	Quantity
Sleeve	5
O-ring	5

## Overview

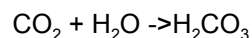
The Dissolved CO<sub>2</sub> Waterproof Sleeve is designed to be used with the PASCO Wireless CO<sub>2</sub> Sensor\* (PS-3208). The Waterproof Sleeve is a membrane made of ePTFE (expanded polytetrafluoroethylene, similar to Teflon®) which is permeable to many gases including carbon dioxide, but impermeable to water. When the sleeve is installed, the probe of the CO<sub>2</sub> Sensor can be submerged for monitoring CO<sub>2</sub> exchange in an aqueous environment.

(\*See the PASCO Web site at

[www.pasco.com](http://www.pasco.com)

or more information.)

Once dissolved into water, CO<sub>2</sub> exists in a chemical equilibrium and forms carbonic acid (H<sub>2</sub>CO<sub>3</sub>).



This equilibrium is affected by pH, temperature, dissolved ions, and partial pressure of the CO<sub>2</sub> gas. The impact of this dynamic equilibrium is a relatively slower response in the gas measurement when compared to other dissolved gas sensors like oxygen. Due to these variables the measurements of dissolved CO<sub>2</sub> are qualitative and accuracy of the measurement is difficult to assign.

## Procedure

1. Visually inspect the ePTFE sleeve to look for punctures or tears, if any imperfections are visible discard the sleeve and replace it.

2. Insert the probe end of the sensor into the sleeve. Make sure the sleeve is completely over the collar of the probe stopper.

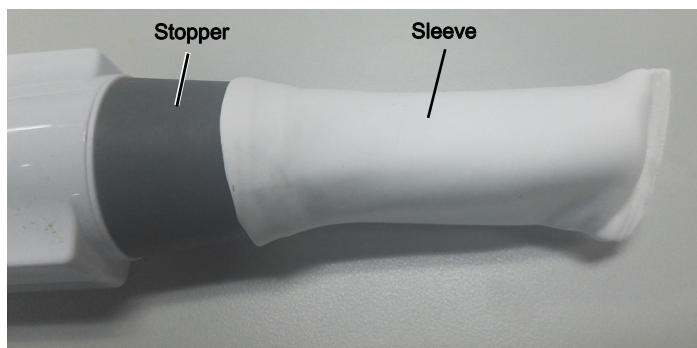


Figure 1: Sleeve over the collar of the stopper

3. It may be necessary to gently stretch the sleeve.

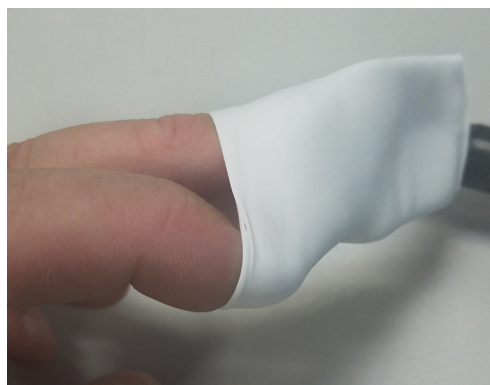


Figure 2: Stretching the sleeve

4. Put the O-ring over the sleeve and secure it into the notch of the stopper. The sensor can now safely be submerged into solutions up to the O-ring. Use the 250-mL sample bottle included with the Wireless CO<sub>2</sub> Sensor or another container.

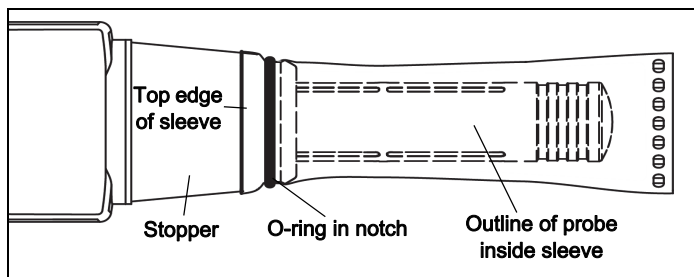


Figure 3: Sleeve and O-ring on sensor probe

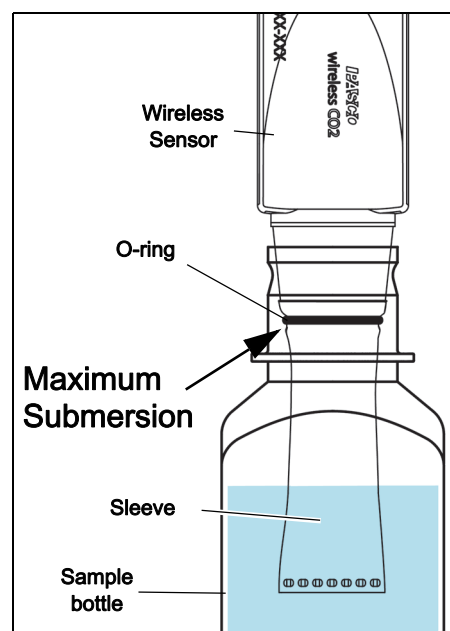


Figure 4: Sensor, Sleeve, and Sample Bottle

## Technical Support

For assistance with any PASCO product, contact PASCO at:

**Address:** PASCO scientific  
10101 Foothills Blvd.  
Roseville, CA 95747-7100

**Phone:** 916-462-8384 (worldwide)  
800-772-8700 (U.S.)

**Email:** [techsupp@pasco.com](mailto:techsupp@pasco.com)

### Limited Warranty

For a description of the product warranty, see the PASCO catalog.

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