



# PVS4100-Series

Portable, Battery-Powered Water Samplers



# PVS4100-Series Portable, Battery-Operated Samplers

The PVS4100C and PVS4100D are deluxe portable, battery-powered water samplers. The PVS4100C is a composite sampler that deposits its water samples into a 2.3-gallon container; the PVS4100D is a discrete sampler that deposits its water samples into up to 24 containers. These samplers have a bigger pump than our other portable water samplers allowing them to support the fastest sampling rates and longest sampling distances.

The PVS4100C and PVS4100D use an external vacuum pump to draw water through intake tubing, instead of the traditional peristaltic pump that induce flow by squeezing flexible tubing. Advantages of the vacuum pump method include faster sampling rates, longer sampling distances, and less maintenance. Because the vacuum method disturbs the water samples less, they better represent the original water solution, especially if the solution has high concentrations of suspended solids. See our vacuum pump water samplers in action at: [www.youtube.com/watch?v=wi4dxFTw-ks](http://www.youtube.com/watch?v=wi4dxFTw-ks)



The sampler's enclosure is a molded medium-density linear polyethylene, designed to handle tough environmental challenges and weathering. Their hub has an insulated ring and a cavity for crushed ice, giving more control over the temperature of the sample.

The PVS4100C and PVS4100D include a programmable controller with 16-key intuitive touch pad. See a demonstration of the programmable controller at: [www.youtube.com/watch?v=yRr80Lm-5Hs](http://www.youtube.com/watch?v=yRr80Lm-5Hs). The controller can accept a pulse input (e.g., rain gage), a 4 to 20 mA signal (e.g. flow meter), or initiate a sample on a timed basis. These samplers can also be interfaced with our dataloggers. Our dataloggers can measure nearly any turbidity, water level, or hydrometeorologic sensor, as well as control the sampler based on time, event, or measured conditions.

## Features

- Controller housed in an environmentally sealed enclosure for corrosion protection, and all information is easily controlled and viewable on a 2x16 character backlit LCD.
- Rapid transport velocities of samples (horizontal draws 250 feet at 2.5 ft/sec), meaning more accurate samples, even of solids.
- Composite or discrete models available, taking samples for one or up to 24 containers.
- Side handles for easy lifting (increases diameter)
- Three-year warranty (five-year extended warranty available as an option).
- Interfaces with Campbell Scientific dataloggers for more measurement and control capabilities.
- Stainless-steel suspension harness for sampling in sewer systems.
- Handcart available for easy transport.

## Ordering Information

### Automatic Samplers

- PVS4100C** Composite Portable Automatic Liquid Sampler; must choose a system size and Warranty option (see below).
- PVS4100D** Discrete Portable Automatic Liquid Sampler; must choose a system size, sample container, and Warranty option (see below).

### System Size Options

- 3 Supports intake and discharge hoses that have a 3/8-in. ID. The 26925-L Sampler 3/8 in. PVC Intake Hose is offered by Campbell Scientific (see below).
- 5 Supports intake and discharge hoses that have a 5/8-in. ID; available for PVS4100C only.

### Sample Container Options for PVS4100D only (choose one)

- PB Provides twenty-four 500-cc bottles as well as the base for the PVS4100D.
- LB Provides twenty-four 1000-cc bottles as well as the base for the PVS4100D.

### Warranty Options (choose one)

- SW Standard three year warranty.
- XW Extended five year warranty.

### Intake Hose

- 26925-L** Sampler 3/8 in. PVC Intake Hose with user-specified length. Enter length, in feet, after the -L. Standard length is 25 ft.; maximum length is 250 ft. Must choose a hose termination option (see below).

### Hose Termination Options

- E1 Includes a lead sinker.
- E2 Includes a stainless-steel strainer.

## Ordering Information Continued

### Accessories

<b>26917</b>	Suspension harness
<b>26903</b>	Handcart with mounting bracket and strap

## Specifications

### Sampler

#### Dimensions

<b>Height:</b>	31.875 in. (80.9 cm)
<b>Height (extended base):</b>	37.875 in. (96.2 cm)
<b>Body Case Diameter:</b>	16.85 in. (42.8 cm)

#### Weight

<b>Sampler (no battery):</b>	26 lb (11.8 kg)
<b>Battery:</b>	14 lb (6.3 kg)

#### Enclosure:

Molded medium density linear polyethylene, three piece construction and stainless-steel fittings

#### Integral Battery:

12 Vdc, 17 Ahrs

#### Cooling System:

Insulated container wall cavity space for ice

### Vacuum System

**Pinch Valve:** Fixed – normally open

**Purge Cycle:** Adjustable from 5 to 99 s

**Suction Cycle:** Variable (adjusts automatically to double the input value of the purge time setting or until liquid contacts level electrode in metering chamber)

**Sample Volume:** Adjustable, 50 to 250 cc

#### Horizontal Transport

<b>Velocity:</b>	minimum of 5 ft/s at 100 ft; > 2.5 ft/s at 250 ft (76.2 m)
<b>Maximum Distance:</b>	250 ft (76.2 m)

#### Metering Chamber

<b>Description:</b>	Acrylic 500 cc, 100 cc calibration
<b>Cover:</b>	Nylon
<b>Level Electrode:</b>	316 stainless steel

**Volume Control Tube:** 316 stainless steel

#### Hose Material

<b>Intake:</b>	Nylon reinforced PVC
<b>Discharge:</b>	Latex



### Controller

<b>Display:</b>	2 x 16 character backlit LCD
<b>Touchpad:</b>	16 key with multi-level menu
<b>Start Delay:</b>	Disabled; Time/Day; Pulse Count; 4-20 mA (0 to 100 pulses/min.); External Contact; Level Control
<b>Sample Initiation:</b>	Disabled; Time/Day; Pulse Count; 4-20 mA (0 to 100 pulses/min.); External Contact
<b>Program Type:</b>	Composite; Multi-Composite; Consecutive; Daily Cycle; Timed Step
<b>Clock:</b>	Real-time clock and operating system
<b>Direct Function Keys:</b>	Manual sample; Manual purge; Manual bottle advance; Restart
<b>Switches:</b>	Controller "on/off" (SPST toggle)
<b>Available Displays:</b>	Real-time clock; process timing; process totals; pulse counting; event response; multilevel descriptions; flashing prompts; diagnostics
<b>Automatic Displays:</b>	Container Full; Fault; Power Interrupt (program resumed); Alternating Time Stamp; Cycle(s) abandoned
<b>Backup Power Source:</b>	Internal lithium battery to maintain program settings and information in case of power failure

