



Accurate, Reliable

Vacuum technology for better samples

Overview

The CVS4200C is a composite, stationary water sampler designed for indoor use. All samples are combined into a single container. The sampler uses reliable, long-lasting, vacuum technology. This sampling method results in faster sample draws and less disturbance of the sample contents. There is also less wear on the tubing, resulting in less frequent maintenance.

The CVS4200D differs from the CS4200C in that it is a discrete sampler that places each sample into a separate container.

Vacuum technology benefits over peristaltic pump samplers:

- ▶ Accurate sample volumes
- ▶ Rapid transport velocities mean more-representative samples
- ▶ Less disturbance of sample
- ▶ Minimal wear on the tubing, resulting in less-frequent maintenance
- ▶ Reduced cross-sample contamination

Detailed Description

The CVS4200C is an indoor stationary water sampler that deposits its water samples into one container. It uses an external vacuum pump to draw water through intake tubing, instead of the traditional peristaltic pump that induces flow by squeezing flexible tubing.

Advantages of the vacuum pump method include faster sampling rates, better vertical lifts, 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. To prevent cross contamination, the sampler use air pressure (up to 28 psi) to purge the tubing of excess water.

The controller that comes with the CVS4200C can accept a pulse input (for example, from a rain gage), a 4 to 20 mA signal (such as from a flow meter), or initiate a sample on a timed basis. The sampler can also be interfaced with our data loggers. Our data loggers can measure nearly any turbidity, water level, or hydrometeorological sensor, as well as control the sampler based on time, event, or measured conditions.

Specifications

Specialized Applications	Indoor, refrigerated	5/8 Inch ID Tubing	Yes
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Compatible	
Sample Container	<ul style="list-style-type: none"> › One 10 L bottle (super clean) › One 9 L bottle or one 20 L bottle (standard clean)
Enclosure	Nema 1 general purpose, 14 gage steel enclosure (upper control section only) with polyester-based powder paint for corrosion resistance
Dimensions	<ul style="list-style-type: none"> › 1.39 x 0.53 x 0.56 m (4.58 x 1.75 x 1.83 ft) with refrigerator › 0.59 x 0.43 x 0.48 m (1.92 x 1.42 x 1.65 ft) without refrigerator

Weight with Refrigerator 68 kg (150 lb)

Weight without Refrigerator 32 kg (70 lb)

Supply Voltage

Sampling System 115 Vac/60 Hz or 12 Vdc

Refrigeration and Heating Units 115 Vac/60 Hz

Vacuum System

Pinch Valve Fixed – normally open

Purge Cycle Adjustable from 1 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 500 cc or Adjustable, 500 to 1000 cc

Horizontal Sample Transport Velocity

- › 1.3 m/s (4.2 ft/s) at 30.5 m (100 ft) for 5/8 in. system
- › 2.2 m/s (7.1 ft/s) at 7.6 m (25 ft) for 3/8 in. system
- › 1.5 m/s (5 ft/s) at 30.5 m (100 ft) for 3/8 in. system
- › 0.8 m/s (2.6 ft/s) at 76.2 m (250 ft) for 3/8 in. system
- › 1.5 m/s (5 ft/s) at 7.6 m (25 ft) for 5/8 in. system
- › 0.7 m/s (2.4 ft/s) at 76.2 m (250 ft) for 5/8 in. system

Horizontal Maximum Transport Distance	76.2 m (250 ft)
Metering Chamber Cover	Nylon
Volume Control Tube	316 stainless steel
Metering Chamber Level Electrode	316 stainless steel
Intake Hose Material	Nylon-reinforced PVC
Discharge Hose Material	Latex

Controller

Display 2 x 16 character backlit LCD

Touchpad 16 key (with multi-level menu)

Start Delay Disabled, Time/Day, Pulse Count, 4 to 20 mA (0 to 100 pulses/min.), External Contact, Level Control

Sample Initiation Disabled, Time/Day, Pulse Count, 4 to 20 mA (0 to 100 pulses/min.), External Contact, Level Control

Program Type Composite, Multi-Composite, Consecutive, Daily Cycle, Timed Step

Clock Real-time clock and operating system

Direct Function Keys Manual sample, Manual purge, Manual bottle advance, Restart

Alarm Outputs (Independent) Cycle abandoned (pulse output), Sample Fault, Container Full

Status Outputs Sample taken (pulse output)

Switches Run/off (SPST toggle), On/off (5 A lighted breaker); Heater on/off; Refrigerator on/off

Available Displays Real time clock, Process timing, Process controls, Pulse counting, Event response, Multi-level description, Flashing prompts, Diagnostics

Automatic Displays Container Full, Fault Interrupt Alternating Time Stamp, Cycle(s) abandoned

For comprehensive details, visit: www.campbellsci.com/cvs4200c 



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