

# Isco Avalanche® Multi-bottle, Refrigerated Portable Sampler

## *Multi-function sampling and data logging with dual-power cooling*

Avalanche® is based on Isco's industry-leading 6712 controller. You get all the advanced control, data logging, and communication features of the 6712, with cooling from either AC or battery power.

Bottle options include 5- and 2.5 gallon composites as well as 4 x 1-gallon and 14 x 950 ml sequential.

A 12V deep-cycle battery delivers 48 hours - or more- of refrigeration. The power-saving cooling system remains on standby until the first sample is drawn, and only then switches on to preserve the collected samples for pickup.

Available routines include: pause-and-resume for intermittent-discharge flow monitoring; sampler pacing by time, non-uniform time, flow or external event; and random interval sample collection.

## *Standard Features*

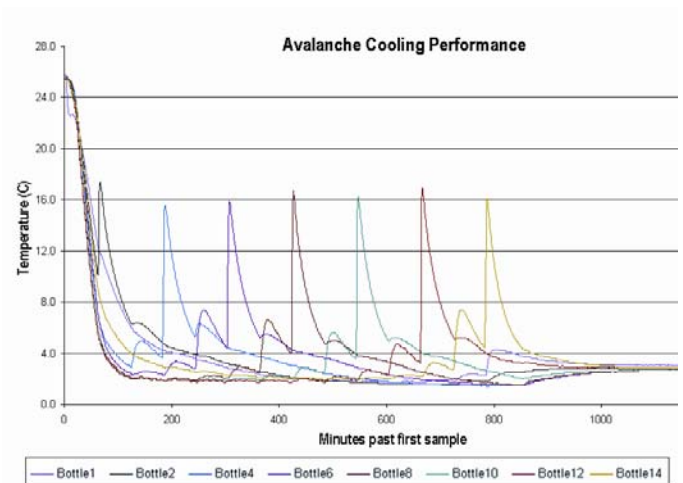
- ◆ Standard and extended programming keeps setup simple when you don't need advanced features.
- ◆ NEMA 4x, 6 (IP67) controller enclosure.
- ◆ SDI-12 interface provides "plug and play" connection with multi-parameter water-quality sondes and other compatible devices.
- ◆ 512kB memory gives you great flexibility for logging environmental data.
- ◆ Sample delivery at the EPA-recommended velocity of 2 ft/sec. at head heights up to 26 feet.
- ◆ Patented pump revolution counter ensures accurate sample volumes - and tells you when tubing should be replaced.



*Optional mobility kit includes pneumatic tires for ease of transport over rough terrain, and a convenient battery platform.*

## *Applications*

- ◆ Stormwater runoff compliance
- ◆ TMDL and watershed monitoring
- ◆ Enforcement monitoring
- ◆ Advanced sampling combined with data logging and communications for flow, rainfall, and water quality parameters.



*Isco temperature control technology accurately preserves samples at 3°C - even under difficult conditions shown above (40°C ambient, 20°C sample temperature).*

## Specifications

Isco Avalanche Sampler	
Size (H x W x D):	30.5 x 14 x 24 inches (78 x 36 x 60 cm)
Weight:	Dry, less battery - 76 lbs (35 kg)
Bottle configurations:	5-gallon poly bottle 2.5-gallon glass bottle configuration 2.5-gallon poly bottle configuration 1-gallon poly bottle configuration (4 bottles) 950 ml poly bottle configuration (14 bottles)
Power Requirements:	12V DC (Supplied by battery or AC power converter.)
Pump	
Intake suction tubing:	
Length	3 to 99 feet (1 to 30 m)
Material	Vinyl or Teflon
Inside dimension	3/8 inch (1 cm)
Pump tubing life:	Typically 1,000,000 pump counts
Maximum lift:	28 feet (8.5 m)
Typical Repeatability	±5 ml or ±5% of the average volume in a set
Typical line velocity at Head height: of	
3 ft. (0.9 m)	3.0 ft./s (0.91 m/s)
10 ft. (3.1 m)	2.9 ft./s (0.87 m/s)
15 ft. (4.6 m)	2.7 ft./s (0.83 m/s)
Liquid presence detector:	Non-wetted, non-conductive sensor detects when liquid sample reaches the pump to automatically compensate for changes in head heights.

Controller	
Weight:	13 lbs. (5.9 kg)
Size (HxWxD)	10.3 x 12.5 x 10 inches (26 x 31.7 x 25.4 cm)
Operational temperature:	32° to 120°F (0° to 49°C)
Enclosure rating:	NEMA 4X, 6 (IP67)
Program memory:	Non-volatile ROM
Flow meter signal input:	5 to 15 volt DC pulse or 25 millisecond isolated contact closure.
No. of composite samples:	Programmable from 1 to 999 samples.
Clock Accuracy:	1 minute per month, typical, for real time clock
Software	
Sample frequency:	1 minute to 99 hours 59 minutes, in 1 minute increments. Non-uniform times in minutes or clock times 1 to 9,999 flow pulses
Sampling modes:	Uniform time, non-uniform time, flow, event. (Flow mode is controlled by external flow meter pulses.)
Programmable sample volumes:	10 to 9,990 ml in 1 ml increments
Sample retries:	If no sample is detected, up to 3 attempts; user selectable
Rinse cycles:	Automatic rinsing of suction line up to 3 rinses for each sample collection
Program storage:	5 sampling programs
Sampling Stop/Resume:	Up to 24 real time/date sample stop/resume commands
Controller diagnostics:	Tests for RAM, ROM, pump, display, and distributor

## Ordering Information

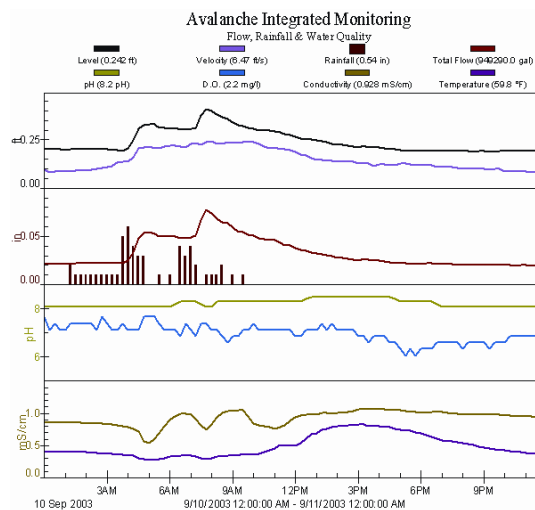
**Note:** Bottle configuration, suction line, and strainer must be ordered separately. 12 VDC operation requires external battery. Contact Isco or your Isco Representative for complete information.

Description	Part Number
Isco Avalanche Sampler (115-230 VAC/12V DC) Includes controller, distributor arm, instruction manual, pocket guide. Standard power cord.*	68-2970-003
5-gallon poly bottle	68-2970-008
2.5-gallon glass bottle configuration	68-2970-006
2.5-gallon poly bottle configuration	68-2970-009
1-gallon poly bottle configuration (4 bottles)	68-2970-002
950 ml poly bottle configuration (14 bottles)	68-2970-001
Mobility Kit	68-2960-004



### Teledyne Isco, Inc.

4700 Superior Street  
Lincoln NE 68504 USA  
Phone: (402) 464-0231  
USA and Canada: (800) 228-4373  
Fax: (402) 465-3022  
E-Mail: [iscoinfo@teledyne.com](mailto:iscoinfo@teledyne.com)  
Internet: [www.isco.com](http://www.isco.com)



The Avalanche controller is a powerful SDI-12 data logger, designed to work directly with Isco's advanced Flowlink® Software.

Data for flow, rainfall, and water quality can be transferred from the Avalanche controller into a Flowlink-equipped PC in three ways: via cable connection, via Isco's 2102 Wireless Communication System, or by phone, using Avalanche's optional built-in modem

Flowlink Software lets you quickly retrieve, import, compare, and analyze data, generate charts and graphs, and create comprehensive reports.