

# 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*

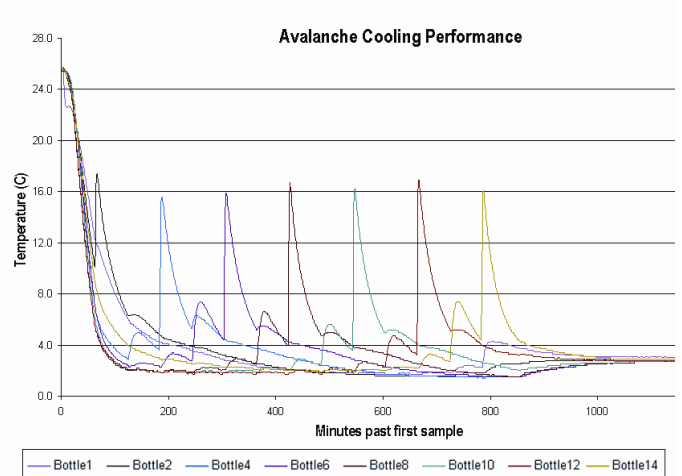
- ◆ Standard and extended programming keeps setup simple when you don't need advanced features.
- ◆ NEMA 4x, 6 (IP67) controller enclosure.
- ◆ SDI-12 interface provides "plug and play" connection with multi-parameter water-quality sondes and other compatible devices.
- ◆ 512kB memory gives you great 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	
<b>Size (H x W x D):</b>	30.5 x 14 x 24 inches (78 x 36 x 60 cm)
<b>Weight:</b>	Dry, less battery - 76 lbs (35 kg)
<b>Bottle configurations:</b>	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)
<b>Power Requirements:</b>	12V DC (Supplied by battery or AC power converter.)
Pump	
<b>Intake suction tubing:</b>	
Length	3 to 99 feet (1 to 30 m)
Material	Vinyl or Teflon
Inside dimension	3/8 inch (1 cm)
<b>Pump tubing life:</b>	Typically 1,000,000 pump counts
<b>Maximum lift:</b>	28 feet (8.5 m)
<b>Typical Repeatability</b>	±5 ml or ±5% of the average volume in a set
<b>Typical line velocity at Head height: of</b>	
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)
<b>Liquid presence detector:</b>	Non-wetted, non-conductive sensor detects when liquid sample reaches the pump to automatically compensate for changes in head heights.

Controller	
<b>Weight:</b>	13 lbs. (5.9 kg)
<b>Size (HxWxD)</b>	10.3 x 12.5 x 10 inches (26 x 31.7 x 25.4 cm)
<b>Operational temperature:</b>	32° to 120°F (0° to 49°C)
<b>Enclosure rating:</b>	NEMA 4X, 6 (IP67)
<b>Program memory:</b>	Non-volatile ROM
<b>Flow meter signal input:</b>	5 to 15 volt DC pulse or 25 millisecond isolated contact closure.
<b>No. of composite samples:</b>	Programmable from 1 to 999 samples.
<b>Clock Accuracy:</b>	1 minute per month, typical, for real time clock
Software	
<b>Sample frequency:</b>	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
<b>Sampling modes:</b>	Uniform time, non-uniform time, flow, event. (Flow mode is controlled by external flow meter pulses.)
<b>Programmable sample volumes:</b>	10 to 9,990 ml in 1 ml increments
<b>Sample retries:</b>	If no sample is detected, up to 3 attempts; user selectable
<b>Rinse cycles:</b>	Automatic rinsing of suction line up to 3 rinses for each sample collection
<b>Program storage:</b>	5 sampling programs
<b>Sampling Stop/Resume:</b>	Up to 24 real time/date sample stop/resume commands
<b>Controller diagnostics:</b>	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
<b>Isco Avalanche Sampler</b> (115-230 VAC/12V DC) Includes controller, distributor arm, instruction manual, pocket guide. Standard power cord.*	<b>68-2970-003</b>
5-gallon poly bottle	<b>68-2970-008</b>
2.5-gallon glass bottle configuration	<b>68-2970-006</b>
2.5-gallon poly bottle configuration	<b>68-2970-009</b>
1-gallon poly bottle configuration (4 bottles)	<b>68-2970-002</b>
950 ml poly bottle configuration (14 bottles)	<b>68-2970-001</b>
Mobility Kit	<b>68-2960-004</b>



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