

# Glacier® Portable Refrigerated Sampler

## *Active cooling in a portable sampler!*

Isco's Glacier® Sampler combines the small size, light weight, and mobility of a portable with an exclusive active temperature control system. Its revolutionary design gives you the best of all worlds: easy transport, quick setup, and accurate sample preservation – without reliance on ice or utility power!

Glacier can be powered by 12V DC or AC line voltage. In the field, Glacier delivers 48 hours or more of refrigeration from a 12 volt deep cycle battery. Its power-saving cooling system stands by until the first sample is drawn. Glacier can wait patiently for days or weeks to collect event-triggered samples, and then preserve them until a convenient pickup time.

## *Dependable, easy-to-program controller*

The Glacier controller uses field-proven technology to ensure the reliability, ease of operation, and durability you expect from Isco.

- ◆ Recall and run a stored program with two keystrokes.
- ◆ NEMA 4x, 6 (IP67) enclosure is watertight and dustproof.
- ◆ Actual measured sample temperature is stored by the controller. Minimum, maximum, and average temperature are reported on LCD and in a downloadable file using Samplink software.
- ◆ Patented LD90 non-contacting Liquid Presence Detector and pump revolution counting system ensure accurate sample volumes.
- ◆ Collect composite samples in 10- or 20-liter bottles, or eliminate bottle washing with ProPak™ single-use liners.



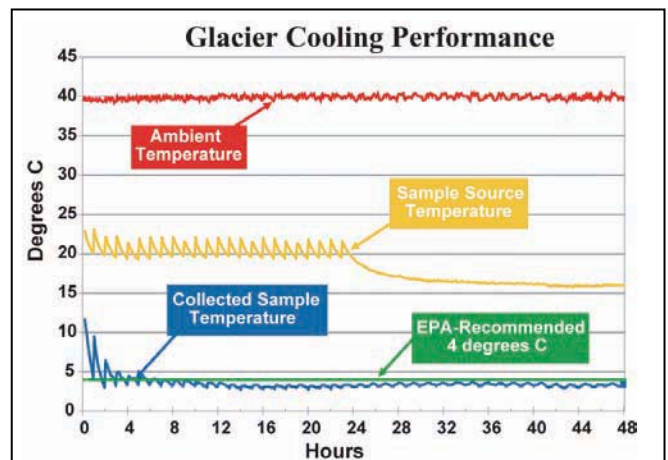
*Above: Our optional mobility kit, with pneumatic tires, carries a 12V battery and lets Glacier roll easily over rough terrain.*



*Right: Under the cowl, a NEMA 4x, 6 (IP67) enclosure protects the detachable controller.*

## *Unique temperature control system*

Glacier's temperature control system continuously measures the actual sample temperature, and precisely regulates cooling to ensure accurate sample preservation.



*Glacier's exclusive temperature control technology accurately preserves samples at 3°C – even under the difficult conditions shown here (40°C ambient, 20°C sample temperature).*

## Specifications

Isco Glacier sampler		Controller	
<b>Size:</b>	25 x 15 x 24 in (63 x 38 x 60 cm)	<b>Weight:</b>	8 lbs (3.6 kg)
<b>Weight: (Dry, less battery)</b>	60 lbs (28 kg)	<b>Size: (H x W x D)</b>	10 x 12.5 x 10 in (26 x 32 x 25 cm)
<b>Bottle Types:</b>	One 10-liter PE or Glass One 20-liter PE One 9-liter ProPak composite sample container with disposable liner	<b>Operational temperature:</b>	32° to 120°F (0° to 49°C)
		<b>Enclosure rating:</b>	NEMA 4X, 6 (IP67)
<b>Power Requirements:</b>	12 VDC (Supplied by external battery, or AC power converter in dual-power version.)	<b>Program memory:</b>	Non-volatile ROM
<b>Cooling:</b>	CFC-free system maintains sample temperature at 37.4°± 1.8°F (3.0°±1.0°C) at ambient temperature of 32°F to 104°F (0°C to 40°C).	<b>Flow meter signal input:</b>	5 to 15 volt DC pulse or 25 millisecond isolated contact closure for flow-paced sampling.
		<b>External trigger:</b>	Initiates sample collection and cooling from contact closure signal
<b>Pump</b>		<b>Number of samples to shutoff:</b>	999 samples maximum with 5 gallon (19 liter) bottle.
		<b>Clock Accuracy:</b>	1 minute per month, typical, for real-time clock
<b>Intake suction tubing:</b> Length Material Inside dimension		<b>Software</b>	
		<b>Sample frequency selection:</b>	1 minute to 9,999 minutes, in 1-minute increments. 1 to 9,999 flow pulses
<b>Pump tubing life:</b>	Typically 2,000 samples	<b>Sampling modes:</b>	Time or flow, event. (Flow mode is controlled by external flow meter pulses.)
<b>Maximum lift:</b>	26 feet (7.9 m)	<b>Programmable sample volumes:</b>	10 to 9,990 ml, in 1.0 ml increments
<b>Typical repeatability</b>	±10 ml	<b>Program storage:</b>	One program running, one stored
<b>Typical line velocity at head height: of</b>		<b>Controller diagnostics:</b>	Tests for RAM, ROM, pump, and display
		3 ft. (0.9 m)	2.9 ft/s (0.88 m/s)
		10 ft. (3.1 m)	2.5 ft/s (0.76 m/s)
		15 ft. (4.6 m)	1.9 ft/s (0.58 m/s)
<b>Liquid presence detector:</b>	Non-wetted, non-conductive sensor for automatic detection of liquid		

## Glacier Ordering Information

**Note:** Bottle configuration, suction line, and strainer must be ordered separately. 12 VDC operation requires suitable external battery.

**Please contact Isco or your Isco representative for pricing and additional information as needed**

Description	Part Number
<b>Glacier Sampler – with dual power option</b> (AC line or 12V DC)	<b>68-2960-001</b>
<b>Glacier Sampler (12V DC- powered only)</b>	<b>68-2960-002</b>
<b>Mobility option (handle and pneumatic tires)</b>	<b>68-2960-004</b>
<b>Adapter kit (for 10-liter bottles)</b>	<b>68-2960-005</b>
<b>10-liter glass bottle</b>	<b>68-2960-006</b>
<b>10-liter polyethylene bottle</b>	<b>68-2960-007</b>
<b>20-liter polyethylene bottle</b>	<b>68-2960-008</b>
<b>9-liter ProPak kit (w/holder and 100 disposable liners)</b>	<b>68-2960-009</b>



*There's no other sampler like Glacier. It's easy to use and transport – with a uniquely efficient cooling system.*

*Simplified controls and programming allow quick and easy push-button setup.*



Water is life. Protect it.

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