

# 5800 Refrigerated Sampler

*The **only** choice for stationary sampling in both municipal and industrial wastewater applications*

The 5800 Refrigerated Sampler is Isco's answer to the rigorous demands of water monitoring, with user-friendly controls and task accommodating features. Along with easy control and on-site programmability, it also has a unique slide-out bottle rack to easily access sample containers.

The controller actively regulates and displays the sample compartment temperature and logs a 24-hour summary to confirm proper sample cooling. The temperature record is downloadable using a basic utility program, such as Tera Term, or data can be viewed on the unit display.

- **Quality Sample Collection**  
Superior pump performance results in repeatable sample volumes.
- **No Shelter Required**  
Units can withstand extreme outdoor environments due to the quality design. The all-weather design is suitable for outdoor installation.
- **Low Maintenance**  
Field replaceable parts reduce maintenance downtime.

## Standard System Features

- Composite or sequential sampling
- Operating range of -20 to 120°F (-29 to 49°C) – without additional heaters
- Four digital alarm outputs
- 4-20 mA, contact closure, and DC pulse flow meter input
- Powerful compressor delivers energy-efficient, high-performance cooling
- Four stored programs
- Lifting handles for easy installation

## Sampling Modes

- Constant time – Constant volume
- Constant time – Variable volume
- Variable time – Constant volume



## Isco-tough and environmentally friendly

The 5800 Sampler follows the Isco standard for weather and corrosion resistance. The tough, double-wall LLDPE cabinet protects against exposure in harsh environments. The well-insulated cabinet promotes temperature stability. Samples remain cool in hot and humid conditions, and a built in heater prevents freezing in cold conditions.

Electro- and powder-coating protects the stainless steel components of the refrigeration system, ensuring long life and reliability in corrosive treatment plant conditions.

## Advanced delivery system

The 5800 Sampler uses Isco's proven peristaltic pump to deliver samples at the EPA-recommended line velocity of at least 2 ft/s (0.6 m/s), and at head heights up to 25 feet (7.6 m). Sample volume accuracy is assured by the pump revolution counter and Isco's liquid detection system.

5800 Refrigerated Sampler	
Size (HxWxD)	52 x 29 x 33 in (132 x 74 x 84 cm)
Weight (empty)	195 lb (88.5 kg)
Refrigerator body	Linear low-density polyethylene
Power requirements	115VAC, 60 Hz, or 230 VAC, 50 Hz
Operational temperature	-20° to 120° F (-29° to 49° C) The display response time may be longer at temperatures below 0° F
Pump	
Intake Suction Tubing	
Length	3 to 99 feet (0.9 to 30 m)
Material	Vinyl or FEP-lined PE
Inside diameter	3/8 inch (9 mm)
Pump tubing life	Typically 1,000,000 pump counts
Maximum suction lift	28 feet (8.5 m)
Typical repeatability	±5 ml or ±5% of the average volume in a set, whichever is greater, at lifts up to 25 ft
Typical accuracy at lifts up to 25 ft	±10 ml or ±10% of programmed value, whichever is greater
Typical Line Velocity at Head Height	
3 ft. (0.9 m)	3.0 ft/s (0.9 m/s)
10 ft. (3 m)	2.9 ft/s (0.9 m/s)
15 ft. (4.6 m)	2.7 ft/s (0.8 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	
Enclosure rating	NEMA 4X, 6 (IP67)
Program memory	Non-volatile ROM
Flow meter signal inputs	5 to 15 volt DC pulse or 25 ms isolated contact closure for Isco flow meters. 4-20 mA input for non-Isco flow meters
Digital alarms	4 programmable outputs; 5V, 100 mA
Number of composite samples	Programmable from 1 to 999 samples
Software	
Sample frequency	1 minute to 99 hours 59 minutes, in 1-minute increments 1 to 9,999 flow pulses
Sampling modes	constant time – constant volume, constant time – variable volume, variable time – constant volume (flow modes are controlled by external flow meter signal)
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
Controller diagnostics	Tests for RAM, ROM, pump, display, and electrical components

Ordering Information			
Isco 5800 Refrigerated Sampler			
Suction line, strainer, and bottle configuration not included; order separately.			
68-5800-001	115V/60Hz		
68-5800-002	230V/50Hz		
68-5800-003	230V/50Hz w/ Chinese Display		
Bottle Configurations			
68-5800-015	Twenty-four 1-liter PP bottles	68-5800-011	One 20-liter round PE bottle
68-5800-016	Twenty-four 350-ml glass bottles	68-5800-012	One 20-liter round glass bottle
68-5800-005	Four 10-liter round PE bottles	68-5800-009	One 10-liter round PE bottle
68-5800-006	Four 10-liter round glass bottles	68-5800-010	One 10-liter round glass bottle
68-5800-019	Four 20-liter square PE bottles	68-5800-017	Twenty-four 1-liter ProPak bottles
68-5800-007	Two 10-liter round PE bottles	68-5800-018	One 10-liter ProPak bottle
68-5800-008	Two 10-liter round glass bottles		



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