



TELEDYNE ISCO
Everywhere you look™



5800

SEQUENTIAL/COMPOSITE
REFRIGERATED SAMPLER

Reliable Stationary Sampling, Where You Need It!

The 5800 Refrigerated Sampler is Teledyne ISCO's answer to the rigorous demands of waste water sampling.

Applications:

- Wastewater treatment plants
- Industrial pretreatment
- Influent and effluent sampling

Standard 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 and DC pulse flowmeter input
- Powerful compressor delivers energy efficient, high-performance cooling
- Four stored programs
- Lifting handles for easy installation

User friendly controls, intuitive design and Teledyne ISCO's dedication to quality make the 5800 Refrigerated Sampler the solution for your stationary sampling needs. Rugged enough to withstand extreme conditions, accurate enough for use in every municipal and industrial wastewater application.

The 5800 sampler uses proven peristaltic pump technology for superior performance and volume accuracy.



ALARM NOTIFICATIONS

The 5800 sampler comes with four remote digital alarms to alert you when the sampling event has started or stopped and will notify you if any errors occur during an event.

The controller actively regulates and displays sample compartment temperature and logs a 24-hour summary to confirm proper sample cooling and maintain sample viability. The sample collection is tailored to your needs through programmable time or flow parameters, program pauses and resumes and an automatic re-run mode.

FLOW PATH AND TUBING MAINTENANCE

Pump tubing can be replaced without tools. The safety interlock cuts power whenever the pump band is unlocked, preventing any accidents while maintaining, repairing or changing tubes. Heat resistors on the control panel keep condensation from developing on the circuit board, eliminating the need for desiccant and desiccant maintenance.



Pump Tubing Bands

Pump Tubing Bands

Pump tubing bands keep the tubing in place and ensure precision performance and consistent sample volume delivery.

Pump Revolution Counter

High sample volume accuracy is achieved with the pump revolution counter. (USEPA recommended live velocity of at least 2ft/s [0.6m/s], even at head heights up to 25ft. [7.6m]).



Liquid Detector

Liquid Detector

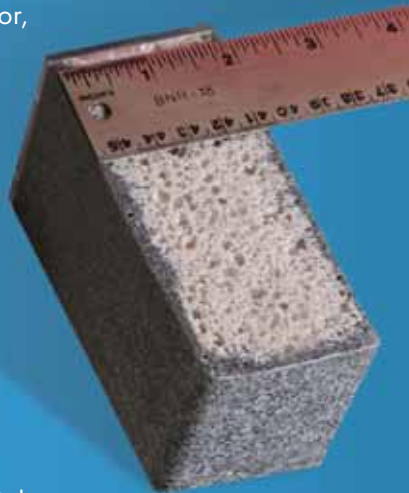
The liquid detector notifies the controller when liquid is present for precise line rinsing and elimination of missed samples.



Extreme Environments? No Problem!

TEMPERATURE CONTROL

Viable samples are maintained in the temperature regulated interior. The double walled design is filled with two inches of insulation. Paired with a 1/6 HP high efficiency compressor, the combination keeps samples cool in hot, humid conditions and the interior heaters prevent the sample from freezing in cold conditions.



CORROSION PROTECTION

To ensure the long life and reliability of the sampler, corrosion protection is a high priority. The refrigerator's condenser and evaporator coils are made of stainless steel, then electro- and powder coated. As an additional measure, a powder-coated stainless-steel protective grill is installed to limit rainwater accumulation and further protect the sampler in corrosive environments.

ALL WEATHER

The 5800's UV protection ensures product longevity and reliability, while the tough double-wall linear low-density polyethylene (LLDPE) construction is designed to withstand harsh outdoor environments without requiring a protective enclosure. The optional pump housing heater allows for uninterrupted sampling in the winter months.



Programming Options

CONTINUOUS SAMPLING for compliance monitoring. Samples can be regularly retrieved and replaced with no need to restart the program routine.

PAUSE & RESUME for schedule breaks in the sample routine. This can be used to monitor businesses that have regular intervals of down time. The sampler can be programmed to pause at the end of the workday and resume the next morning.

AUTO-RERUN restarts the program at the same time each day. Provides accurate daily comparisons based on the time the samples are taken.

Service Made Simple

Maintenance for the 5800 has been simplified by a self-diagnostic system and built-in alarms. The sampler notifies you when it needs regular maintenance or more involved repairs. Modular components and easy access compartments simplify servicing in the field and Teledyne ISCO technicians are always available to solve any complication or problem that arises.



Bottle Options

The 5800 sampler offers different glass and plastic bottle configurations to meet various sampling needs. These options include:

- Configurations to accommodate 1, 4, or 24 bottles.
- Composite bottles for compliance monitoring
- Discrete sampling for process control



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Teledyne ISCO is continually improving its products and reserves the right to change specifications without notice.

5800

Refrigerated Sampler

The 5800 Refrigerated Sampler is Teledyne 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 only choice for stationary sampling in both municipal and industrial wastewater applications.

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.

The 5800 Sampler follows the Teledyne 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.

The 5800 Sampler uses proven peristaltic pump technology 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 Teledyne ISCO's liquid detection system.



The 5800 sampler offers different glass and plastic bottle configurations to meet various sampling programs.



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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 ft (0.9 to 30 m)
-Material:	Vinyl or FEP-lined PE
-Inside Diameter:	3/8 in (9 mm)
Pump Tubing Life:	Typically 1,000,000 pump counts
Maximum Suction Lift:	28 ft (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) head height:	3.0 ft/s (0.9 m/s)
10 ft (3 m) head height:	2.9 ft/s (0.88 m/s)
15 ft (4.6 m) head height:	2.7 ft/s (0.82 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
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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 Teledyne ISCO flow meters. 4–20 mA input or non-Teledyne 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

5800 Refrigerated Sampler

Suction line, strainer, and bottle configuration not included; order separately.	
115V/60Hz	68-5800-001
230V/50Hz	68-5800-002
230V/50Hz w/ Chinese Display	68-5800-003

Bottle Configurations

Twenty-four 1-liter PP bottles	68-5800-015
Twenty-four 350-ml glass bottles	68-5800-016
Four 10-liter round PE bottles	68-5800-005
Four 10-liter round glass bottles.....	68-5800-006
Four 20-liter square PE bottles	68-5800-019
Two 10-liter round PE bottles	68-5800-007
Two 10-liter round glass bottles	68-5800-008
One 20-liter round PE bottle	68-5800-011
One 20-liter round glass bottle.....	68-5800-012
One 10-liter round PE bottle	68-5800-009
One 10-liter round glass bottle.....	68-5800-010
Twenty-four 1-liter ProPak bottles	68-5800-017
One 10-liter ProPak bottle	68-5800-018

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