

# Isco 3710FR Corrosion-Resistant Refrigerated Composite Sampler

**I**sco 3710FR Composite Samplers are built tough. They can easily handle municipal and industrial applications outdoors, and are specifically designed to withstand corrosive environments that can quickly ruin ordinary samplers.

## ***Resists Corrosion and Weather; Needs No Enclosure***

Isco FR Samplers have an exterior shell custom molded from resin transfer molded fiberglass protected by a tough, UV resistant, glossy gel coat. The interior is constructed of high impact strength ABS plastic.

The refrigeration system is equally tough—the condenser coil is coated with durable polyester, the evaporator plate is powder coated with epoxy, and polyester tubing or phenolic paint protects the copper refrigeration lines.

## ***Versatile Composite Sampling***

The 3710FR Composite Sampler is ideal for general purpose and priority pollutant sampling. Time or flow proportioned composite samples are collected in a single polyethylene or glass bottle. A weight-activated table provides an adjustable, fail-safe shutoff to prevent overfilling.



*Isco 3710FR Samplers provide years of dependable service in harsh environments.*



*Isco 3710FR Refrigerated Composite Sampler.*

## ***Accurate Sample Volumes***

The exclusive Isco LD90 Liquid Presence Detector and pump revolution counting system deliver accurate sample volumes time after time, with automatic compensation for changes in head heights.

Unlike other liquid detectors, the LD90 does not contact the sample, so it never requires cleaning or maintenance and is not affected by temperature or liquid composition.

## ***Environmentally Sealed Controller***

All controller components are protected in a tough, environmentally sealed enclosure that meets NEMA 4X, 6 requirements for submersible, watertight, dust-tight, and corrosion resistant operation. To give you added flexibility, the controller is interchangeable on portable and stationary samplers.

*See separate data sheets for 3700 Sequential Composite Samplers.*

# Isco 3710FR Refrigerated Composite Sampler Specifications

Contact the factory or your Isco representative for additional specifications.

Refrigerator			Software		
Height	47 in.	119 cm	Sample Frequency Selection	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	
Width	26 in.	66 cm	Programmable Sample Volumes	10 to 9,990 ml in 1 ml increments	
Depth	26 in.	66 cm	Liquid Presence Detector	Non contacting patented LD90	
Weight (dry)	160 lbs.	73 kg	Sample Retries	If no sample is detected, up to 3 attempts; user selectable	
Exterior Materials	Resin transfer molded fiberglass with UV resistant fiberglass gel coat		Rinse Cycles	Automatic rinsing of suction line up to 3 rinses for each sample collection	
Frame Construction	Stainless steel		Sample Distribution	up to 999 maximum programmed samples, or with fail-safe weight table shutoff	
Corrosion Protection			Program Storage	3 sampling programs	
Condenser	Powder coated with polyurethane resin		Programming Modes	Time, non-uniform time, flow, and STORM	
Compressor	Enamel paint		Controller Diagnostics	Tests for RAM, ROM, pump display, and distributor	
Evaporator	Powder coated with food grade epoxy		Controller		
Refrigeration tubing	Polyester tubing or phenolic resin		Weight	11 lbs.	5.9 kg
Insulation	Environmentally safe, non CFC foam		Dimensions	10 x 12.5 x 10 in.	26 x 32 x 25 cm
Top	3 in.	7.6 cm	Operational Temperature	32° to 120°F	0° to 49°C
Sides	1.5 in.	3.8 cm	Enclosure Rating	NEMA 4X, 6	IP67
Thermal Resistance Factor	R-16		Program Memory	Non-volatile ROM	
Typical Recovery Time	5 minutes		Flow Meter	5 to 15 volt DC pulse or 25 millisecond isolated contact closure	
<i>Recovery time is defined as the time for the internal air temperature to return to 39°F (4°C) with the refrigerator running and set at 39°F (4°C) and the door has been opened for one minute. The door has been opened at least 4 minutes after the compressor has turned on.</i>			Pump		
External Temperature	75°F	24°C	Intake Suction Tubing Length	3 to 99 ft.	1 to 30 m
Sample Temperature			Material	Vinyl or Teflon	
Set-point Range	32° to 46°F	0° to 8°C	Inside Dimension	¾ in. or ¼ in.	
Sample Temperature			Pump Tubing Life	Recommended 500,000 pump counts	
Set-point Accuracy (at 25°C)	±1.8°F	±1°C	Maximum Suction Lift	26 ft.	7.9 m
Refrigerant Type	R-134a, 1, 1, 1, 2-tetrafluoroethane CH <sub>2</sub> FCF <sub>3</sub>		Typical Repeatability	±10 ml	
Compressor	1/5 horsepower		Typical Line Transport Velocity at head heights of:		
Power Requirements	120V 60 Hz	240V 50/60 Hz	3 ft. (0.9 m)	2.9 ft./s	0.88 m/s
Current Draw			10 ft. (3.1 m)	2.5 ft./s	0.76 m/s
Running	3.5 amp @ 120V	1.75 amp @ 240V	15 ft. (4.6 m)	1.9 ft./s	0.58 m/s
Starting	17 amp @ 120V	8.5 amp @ 240V			
Stalled Compressor	21 amp @ 120V	10.5 amp @ 240V			
Compressor Protection					
Safety cutout at	221°F	105°C			
Heaters	3, automatically controlled				
Heater Capacity	60 watts(evaporator heaters): 30 watts(compressor heater)				

## Ordering Information

Suction line and strainer not included; order separately. Contact the factory or your Isco representative for complete ordering information.

Description	Part Number	
3710FR Refrigerated Composite Sampler	120V AC, 60 Hz	240V AC, 50/60 Hz
with 1 round 2.5 gallon polyethylene bottle	68-3730-006	68-3720-007
with 1 round 2.5 gallon glass bottle	68-3730-008	68-3720-009
with 1 round 4 gallon polyethylene bottle	68-3730-010	68-3720-011
with 1 round 5.5 gallon polyethylene bottle	68-3730-012	68-3720-013
3710FR refrigeration unit only	68-3730-003	68-3720-004



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