

Isco 3700FR Corrosion-Resistant Refrigerated Sampler

Isco 3700FR Sequential/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 Sample Options

The 3700FR is a sequential sampler that can be easily converted to a composite sampler for added flexibility. Advanced multiplexing allows multiple bottles to be filled at each sampling event, or multiple samples to be placed in each bottle. The sampler can be set up in a variety of sequential or composite sampling configurations including 1, 2, 8, or 24 glass or plastic bottles.



Isco 3700FR Refrigerated Sampler.

Accurate Sample Volumes

The exclusive LD90 Liquid Presence Detector and Isco 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.

◀ *Isco 3700FR Samplers require no enclosure and provide years of dependable service in harsh environments. Automatic heaters and three separate temperature sensors maintain precise temperature control under all conditions.*

See separate data sheets for 3710 Composite-only Samplers.

Isco 3700FR Refrigerated Sampler Specifications

Contact the factory or your Isco representative for additional specifications.

Refrigerator			Software		
Height	47 in.	125 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	Samples per Bottle: 100 maximum Bottles per Sample: Up to number of bottles in set	
Corrosion Protection			Program Storage	3 sampling programs	
Condenser	Powder coated with polyester		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>			Signal Requirements	5 to 15 volt DC pulse or 25 millisecond isolated contact closure	
External Temperature	75°F	24°C	Pump		
Sample Temperature			Intake Suction Tubing		
Set-point Range	32° to 46°F	0° to 8°C	Length	3 to 99 ft.	1 to 30 m
Sample Temperature			Material	Vinyl or Teflon	
Set-point Accuracy (at 25°C)	±1.8°F	±1°C	Inside Dimension	¾ in. or ¼ in.	
Refrigerant Type	R-134a, 1, 1, 1, 2-tetrafluoroethane CH ₂ FCF ₃		Pump Tubing Life	Recommended 500,000 pump counts	
Compressor	1/5 horsepower		Maximum Suction Lift	26 ft.	7.9 m
Power Requirements	120V 60 Hz	240V 50/60 Hz	Typical Repeatability	±10 ml	
Current Draw			Typical Line Transport Velocity	at head heights of:	
Running	3.5 amp @ 120V	1.75 amp @ 240V	3 ft. (0.9 m)	2.9 ft./s	0.88 m/s
Starting	17 amp @ 120V	8.5 amp @ 240V	10 ft. (3.1 m)	2.5 ft./s	0.76 m/s
Stalled Compressor	21 amp @ 120V	10.5 amp @ 240V	15 ft. (4.6 m)	1.9 ft./s	0.58 m/s
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		Description	Part Number	
3700FR Refrigerated Sampler	120V AC, 60 Hz	240V AC, 50/60 Hz	3700FR Refrigerated Sampler (cont'd.)	120V AC, 60 Hz	240V AC, 50/60 Hz
with 24 wedge shaped 1 liter polypropylene bottles	68-3720-001	68-3720-002	with 2 rectangular 2 gallon polyethylene bottles	68-3720-017	68-3720-018
with 24 round 350 ml glass bottles	68-3720-003	68-3720-004	with 2 round 2.5 gallon glass bottles	68-3720-019	68-3720-020
with 8 round 2 liter polyethylene bottles	68-3720-009	68-3720-010	with 1 round 2.5 gallon polyethylene bottle	68-3720-026	not available
with 8 round 1.8 liter glass bottles	68-3720-011	68-3720-012	with 1 round 2.5 gallon glass bottle	68-3720-027	not available



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