

**RAS 3-48-100
Remote Access Sampler***

The RAS is a time-series water sampler for use in aquatic environments. The RAS can be deployed for a short time period such as hours, or continuously up to 18 months. Sample capacity of the RAS 3-48-100 is 48 collection events at 100 ml each.

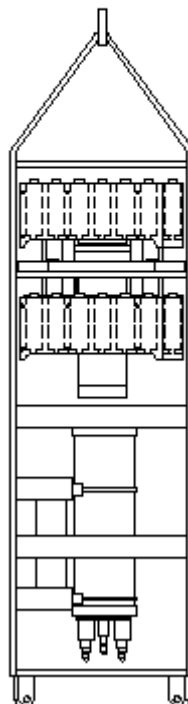
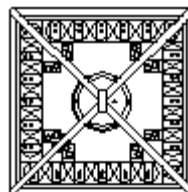
A series of features and options are employed in the RAS to ensure that the samples collected are unbiased. Acid cleaning cycles can be used throughout the deployment to remove bio-fouling and other contaminants. These cleaning cycles occur prior to every event and/or at intervals throughout the deployment. Additionally, the pump is placed 'down-stream' from the sample so that the sample water does not pass through the pump. Finally, the user is able to add fixatives into the sample containers before each deployment.

The RAS uses an internal computer that operates both the patented multi-port valve and the positive displacement pump. The internal computer directs the flow of the acid wash, cleaning cycles and sampling through the multi-port valve. This valve safely seals the samples from each other and the ambient water. The internal computer also controls the flow and volume through the gear pump.

The menu-driven, user friendly, software is designed for maximum deployment flexibility. An external computer can access the internal computer via serial communications (RS-232). The RAS internal computer records a self diagnostic report along with a record for each event.

*U.S. Patent #5,341,834 & 5,441,071; Japan #248282

Three-year warranty on parts and labor



Specifications

Physical	Length	165 cm	Weight in air	Approx. 60 kg
	Width	43 cm	Weight in water	Approx. 40 kg
	Height	43 cm	Deployment types	In-line mooring
Multi-port valve	Number of ports	50		
	Drive		High torque stepper motor with gearhead	
	Material		Noryl	
Sample Containers	Quantity	48		
	Material		Acrylic	
	Bag size		Approx. 95 ml	
	Bag Material		Metalized Polyethylene lined, others available	
Pump	Flow-rate		50 ml/min	
	Flow-rate error		Average $\pm 3\%$	
	Type		Gear pump (not effected by dilute acid)	
	Drive		Brushless DC motor	
Controller Housing	Material		Aluminum, 6061-T6 hardcoat anodized	
	Electronics		McLane ITC	
	Current usage		3100 mA for one year depoyment	
	Communications		Serial (RS-232)	
Frame	Material		316 Stainless Steel, electro-polished	

Structure In-line mooring, weldment

Bridle configuration 4 in-line

Frame & bridle 19 mm dia. insulated eyes

Max. in-line tension 2,300 kg (5,000 lbs)

Operation Conditions Maximum Depth 5,500 m, optional full ocean depth model

Min. deployment time 5 minutes per sample

Max. deployment time 18 months

Operating temperature -2 to 50 °C (Electronics tested to -10 to 100 °C)