McLANE RESEARCH LABORATORIES, INC

Remote Access Sampler (RAS – 500)

Application: Deep ocean or coastal time-series water sampler with features designed to autonomously obtain pure, unbiased specimens under an operator-programmed sample schedule. The RAS-500 collects water for biological, dissolved major and minor nutrient, dissolved trace metal, or dissolved organic carbon analysis.

RAS-500 Features and Benefits

- **48 samples**, 500 ml each.
- Patented multi-port valve **isolates samples**.
- Water **flows directly** to sample containers without passing through a pump.
- **Bio-fouling acid flush** cleans intake.
- Sample collection **with** or **without pre-filters**.
- Sample bags are available with **Luer** locking valves or **Jaco** fittings.
- Critical deployment **data preserved** in non-volatile memory.

Programmed schedule: Schedule controls volume and frequency of acid flush and rinsing cycles, sampling event time limits, data collection periods, and flow and volume of collected samples. EEPROM stores critical deployment data with a report of sample event conditions.

Customized hardware and software: Other customization is possible such as adding external sensors for action-triggered sampling. An optional external temperature sensor is available.

Deployment: Mooring, bottom lander, or tethered from a ship.

**U.S. Patent Nos. 5,341,834 & 5,441,071 Japan Patent No. 248282*

RAS-500 Specifications

Dimensions	Height	128cm (50.2 in)
	Width	73 cm (28.7 in)
	Length (body)	73 cm (28.7 in)
Weight (Approx.)	In air, sample tubes empty	110 kg (240 lbs)
	In air, sample tubes filled	148 kg (325 lbs)
	In water	57 kg (125 lbs)
Multi-port Valve	Number of Ports	50 ports (48 samples)
	Material	HYDEX plastic valve stators and Kynar plastic rotor
	Drive	High torque stepper motor with 100:1 planetary gear head
	Positioning	Optical sensor with slotted disk
Sample Bags (48)	Size	Approximately 500 ml
	Material	Metalized polyethylene lined or Tedlar
Pump	Flow rate	75 ml/min fixed rate (±3% error)
	Type	Gear pump
	Drive	Brushless 3 phase DC motor
Controller	Housing Material	Aluminum, 6061-T6 hardcoat anodized
	Power Supply	31.5 VDC Alkaline battery pack
	Power consumption	3,500 mAh (1 year deployment)
	Communications	Serial (RS-232)
Frame	Material	316 electro-polished stainless steel (Titanium available)
	Structure & bridle configuration	In-line mooring, weldment, 4 in-line
	Frame & bridle eyes	19 mm diameter, insulated
	Max. in-line tension	2,300 kg (5,000 lbs)
Operations	Maximum depth	5,500 meters
	Min /Max deployment time	10 minutes per sample / 18 months
	Operating temperature	0° to 50°C (Electronics tested to –10°C)

Specifications Subject to Change without Notice

McLANE RESEARCH LABORATORIES, INC

Falmouth Technology Park
121 Bernard Saint Jean Drive
East Falmouth, MA 02536

Tel: 508.495.4000
Fax: 508.495.3333
Web: www.mclanelabs.com

02/05