MGS-6
MARINE GRAVITY METER

The latest in a line of Marine Gravity Meters going back over 50 years. The MGS-6: Smaller, lighter, and over 100X more quiet than its predecessor.

MICRO g LACOSTE
A DIVISION OF LRS

MICRO-G LACOSTE IS PROUD TO ANNOUNCE the next generation of marine based dynamic gravity meters: The Marine Gravity System-6 (MGS-6). It represents the next generation in a long line of LaCoste-based dynamic gravity systems, stretching back to the first successful dynamic gravity meter tests on ships more than 50 years ago. Note though, that the MGS-6 is more than a simple upgrade to the Air-Sea System II (AS-2). The MGS-6 is based on the smaller, lighter, more power-efficient TAGS-6 (airborne) platform, and employs the same full-force feedback sensor. In both systems, the platform control and data acquisition system have been overhauled, resulting in unparalleled data quality.

NEW FEATURES

- Smaller sensor/gimbal (60%)
- Lighter sensor/gimbal (30%)
- New slip ring technology on the gimbal makes for a more robust and reliable stable platform
- Larger pitch (25° vs. 22°) and larger Roll (35° vs. 25°) ranges
- Full feedback: ± 500,000 mGal range on beam
- 100 times the dynamic acceleration range
- Double oven temperature control
- Temperature controlled electronics
- Separate, rack-mountable electronic unit and computer allow for more flexibility in configuration
- Lockable gimbal
- System ships with gimbal installed in frame
- Static repeatability improved (0.02 vs. 0.05 milliGals)
- Reduced power requirements (75 vs. 240W)
- Greatly reduced size: 48% smaller (59 x 53 x 56cm vs. 71 x 56 x 84cm, frame size)
- Greatly reduced weight (101kg vs. 121kg, including UPS and electronics)

APPLICATIONS INCLUDE

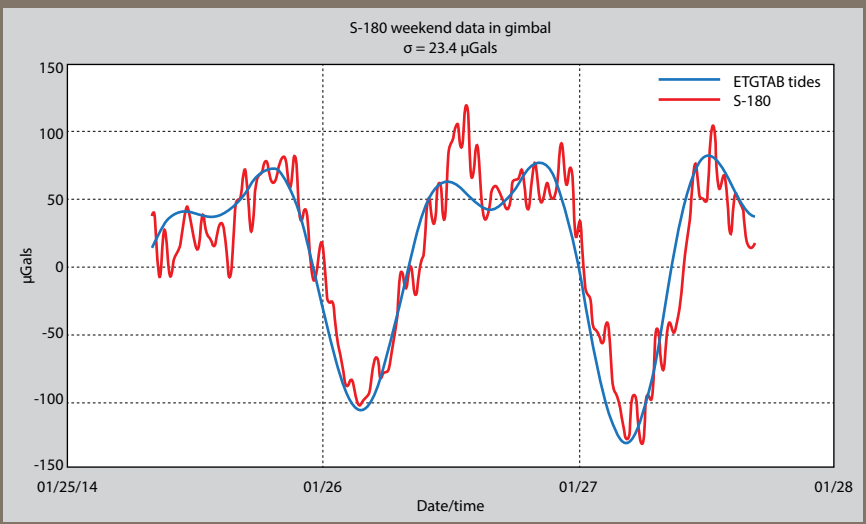
- Geoid Mapping
- Regional Geophysics
- Petroleum Exploration
- Mineral Exploration

NEW FULL FORCE FEEDBACK SENSOR:

- Full feedback: ± 500,000 mGal range on beam
- 100 times the dynamic acceleration range
- Double oven temperature control
- Temperature controlled electronics, accelerometers, and FOGs

SAMPLE DATA:

New system is 100x quieter than older air-damped and magnetic-damped systems. Below is a plot of the earth's tides over approximately 2 days compared with predicted model. (System is mounted in active gimbal, stationary in laboratory.)



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SPECIFICATIONS

COMPONENT	VARIABLE	SPECIFICATIONS
SENSOR	WORLDWIDE RANGE:	Range: ± 500,000 milliGals
	DRIFT:	3 milliGals per month or less
	TEMPERATURE SETPOINT:	45° to 65° C
STABILIZED PLATFORM	PLATFORM PITCH:	± 25 degrees
	PLATFORM ROLL:	± 35 degrees
	PLATFORM PERIOD:	4 to 4.5 Minutes
	PLATFORM DAMPING:	0.707 of critical
CONTROL SYSTEM	RECORDING RATE:	1 Hz
	ADDITIONAL I/O:	Electronics, Sensor Temperature, Sensor Pressure
SYSTEM PERFORMANCE	DYNAMIC RANGE:	25,000,000
	STATIC REPEATABILITY:	0.02 milliGals
	ACCURACY:	0.6 milliGals, or better
	50,000 mGal Horizontal Acceleration:	0.25 milliGals
	100,000 mGal Horizontal Acceleration:	0.50 milliGals
	100,000 mGal Vertical Acceleration:	0.25 milliGals
MISCELLANEOUS	OPERATING TEMPERATURE:	5° to 50°C
	STORAGE TEMPERATURE:	-10° to 50°C
	POWER INPUTS (INTO UPS):	75 Watts average at 27°C
		300 Watts maximum
	DIMENSIONS:	61.4 x 55.5 x 72.0 cm (including UPS and built in electronics rack)
	WEIGHT:	68kg (Sensor, Gimbal, and Frame), 101kg (all components).

SPECIFICATIONS SUBJECT TO CHANGE

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