Seatex MGC Calibration Certificate

Seatex MGC model number:	R3.v
Serial number:	50998
Calibration certificate number:	20231125-50998

MGC

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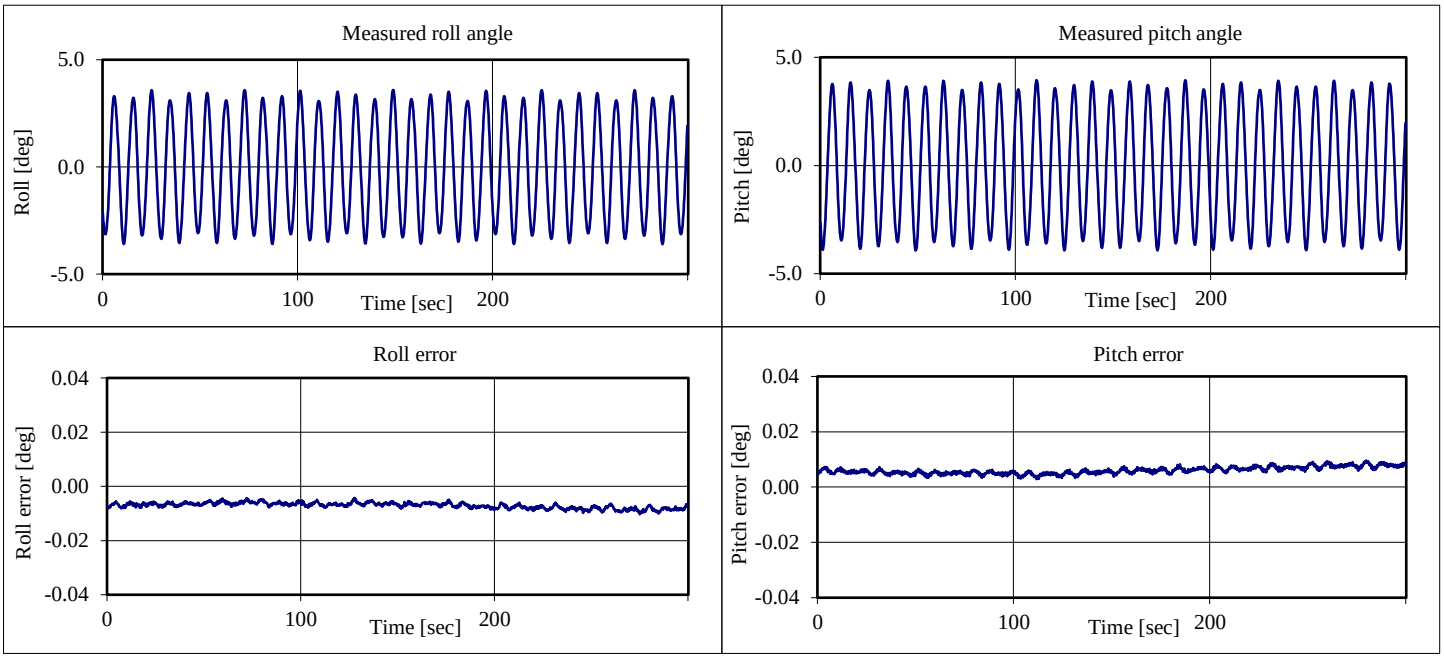
1. Roll and Pitch Accuracy Tests

Roll and pitch accuracy	Test requirement	Roll	Pitch
RMS static roll and pitch [deg]	0.01	Passed	Passed
RMS dynamic roll and pitch [deg]	0.01	Passed	Passed

The static accuracy was measured by sampling at 4 Hz for 30 minutes, when the Seatex MGC is stationary.
The dynamic accuracy was measured in a rate table test with simultaneous sinusoidal exitation in two axes for 10 minutes.

Plots of results from dynamic test of Seatex MGC with serial number 50998



2. Rate Gyro Accuracy Tests

Angular rate accuracy	Test requirement	R-axis	P-axis	Y-axis
RMS rate sensor noise [deg/s]	0.01	Passed	Passed	Passed
RMS rate sensor scale factor error [%]	0.001	Passed	Passed	Passed

The angular rate sensor noise level was measured by sampling at 4 Hz for 30 minutes, when the Seatex MGC is stationary.
The rate gyro scale factor error was tested by single-axis rotations on a rate table at ±30°/s and at ±50°/s.

3. Accelerometer Accuracy Tests

Linear acceleration accuracy	Test requirement	R-axis	P-axis	Y-axis
STD acceleration sensor noise [m/s^2]	0.0002	Passed	Passed	Passed
RMS acceleration sensor scale factor error [%]	0.008	Passed	Passed	Passed

The acceleration sensor noise level was measured by sampling at 4 Hz for 30 minutes, when the Seatex MGC is stationary.
The accelerometer scale factor was measured by tilting the Seatex MGC in steps of 90° around a circle.

The Calibration Certificate test requirements are the technical specification limits in the MGC User Manual
A two-axis rate table with temperature chamber (DC 246-TCM from Acutronic AG, 1998) was used to test the unit.
All tests were performed at room temperature according to test procedures in the MGC Production Manual

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Date of calibration: *2023-11-25*