

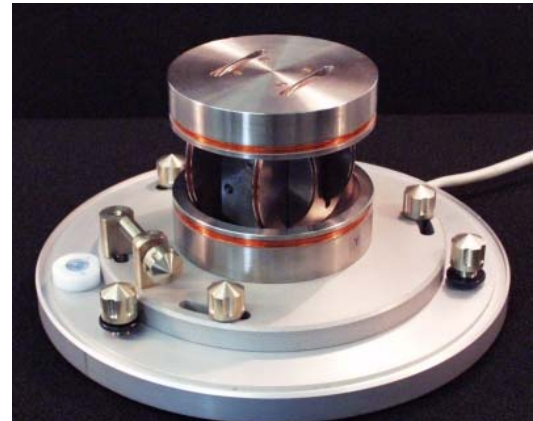
Magson Fluxgate Sensors

All Magson fluxgate sensors are based on self developed ringcore technology. Ringcore parameters like width and thickness of the soft magnetic tape (6-81-Mo permalloy), tape isolation, tape adjustment, the number of windings, the diameter of the ringcore, the timing and temperature of the thermal process and advanced technologies for fixing of the tape were optimised to improve the ringcore characteristics. Therefore a noise level of less than $20\text{pT}/\sqrt{\text{Hz}}$ at 1Hz and a offset drift of less than $10\text{nT}/\text{year}$ can be guaranteed for all sensors.

Three examples of sensors using these ringcores are presented in the following Tables.

Vector-compensated Fluxgate Sensor

sensor type:	3-component vector compensated ringcore sensor
coil system:	made of titan expansion coefficient: $10\text{ppm}/^\circ\text{C}$
dimensions:	height 11cm, diameter 12cm
sensor weight:	2.5kg
Application:	geomagnetic observatories magnetotellurics



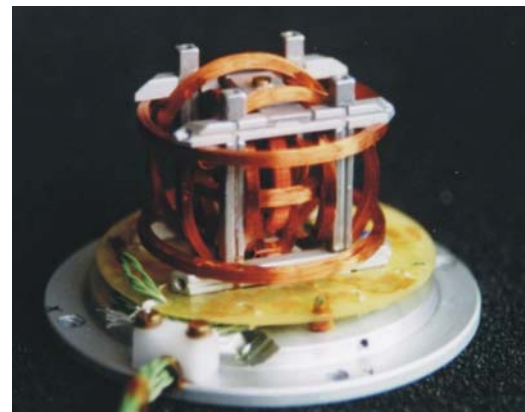
Single Component Fluxgate Sensor

sensor type:	ringcore sensor consists as three single sensors
coil system:	made of glass ceramics expansion coefficient: $10\text{ppm}/^\circ\text{C}$
dimensions:	height 6cm, diameter 15cm
sensor weight:	1.1kg
Application:	geomagnetic observatories magnetotellurics



Low Weight Fluxgate Sensor

sensor type:	3-component vector compensated
coil system:	self-supported sensor construction expansion coefficient: $30\text{ppm}/^\circ\text{C}$
dimensions:	height 4cm, diameter 5cm
sensor weight:	0.05kg
Application:	space born magnetometers sea bottom magnetometers



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