3480 OG Electromagnet

Features

- Small and Light Weight at 32 kg

- High Angle of Incidence up to 80° Longitudinal and 90° Transverse

- Peak Continuous Fields up to 1.2T for 10m pole gap

- Any Mounting Orientation
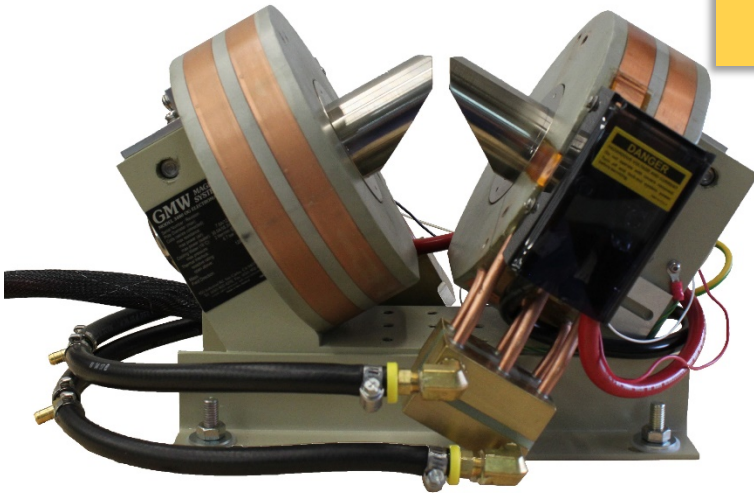
- Fast Cycle Times

Applications

- MOKE especially for FORC

OVERVIEW

The 3480 OG dipole electromagnet is a light weight versatile system intended to provide an open geometry particularly suited to MOKE applications. At 32 kg this magnet can easily be moved between applications and can be operated in any orientation.

The 3480 OG is shipped with a pair of poles that are shaped to allow access for a probing laser with angle of incidence up to 60°. GMW can also design custom poles that achieve a specific performance. Poles are interchangeable and adjustable.

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Model 3480 OG General Specifications

Mechanical

Dimensions	325mm W x 197mm D x 216mm H
Weight (excluding hoses and water)	32kg

Coils (series connected)

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Resistance (20°C)	1.418Ω
Max. Resistance	1.666Ω
Low Current Inductance	0.18H
High Current Inductance	0.13H
Max. continuous Power	35A, 60V
Peak Power (Sinusoid)	50A, 83V
Peak Power (Triangle Wave)	60A, 100V
Max. Continuous Power (air cooled)	7A, 12V
Water cooling (supply 18°C)	4liters/min, 1.0bar (1US GPM, 15psid)
Anticipated max. sinusoidal frequency (1T, 3dB)	10Hz

Safety

Overtemperature Interlock	Selco 802L-062 thermostat, mounted onto each cooling plate, wired in series. Contacts below 65°C
Diameter Sphere Containing 5G-surface ("fringe field")	1000mm

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Field Profile on Sample at 35A Excitation (water cooled)
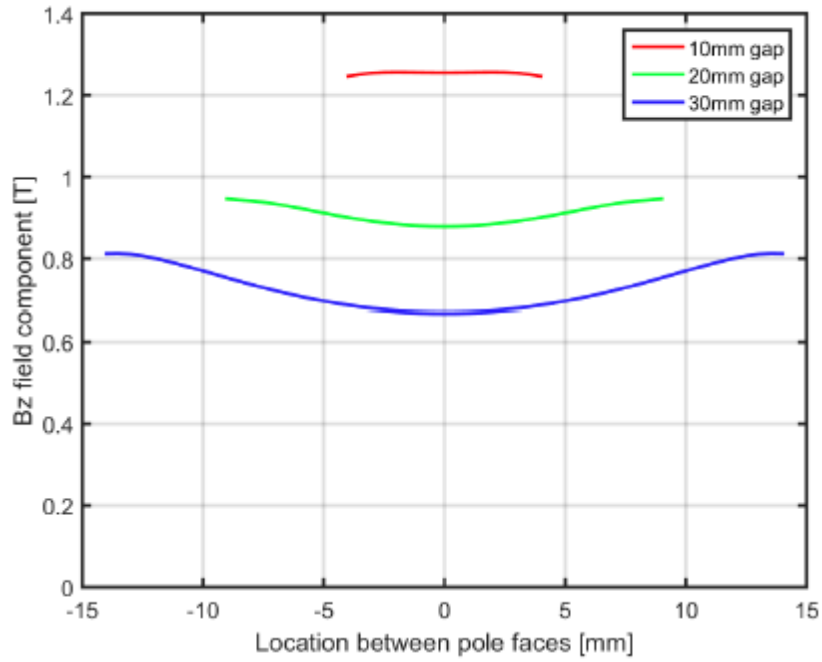
Field Profile on Sample at 7A Excitation (air cooled)
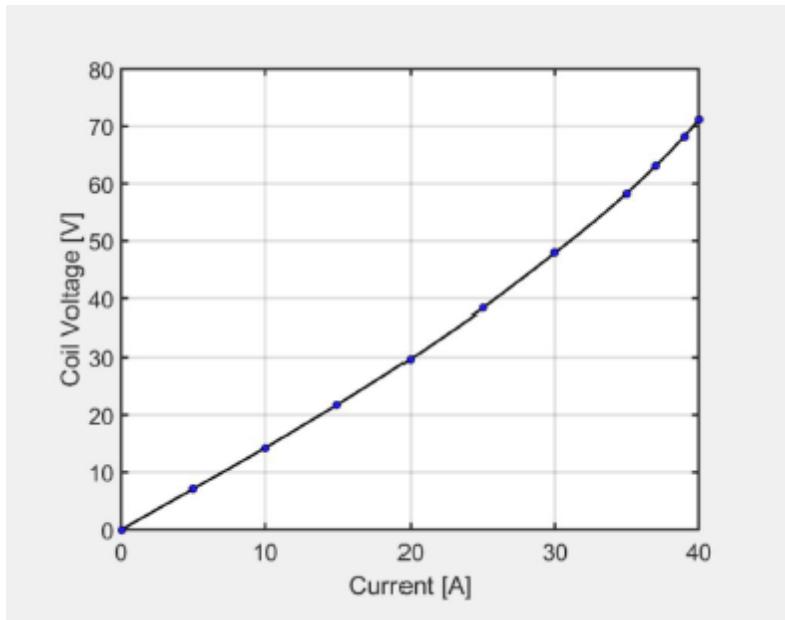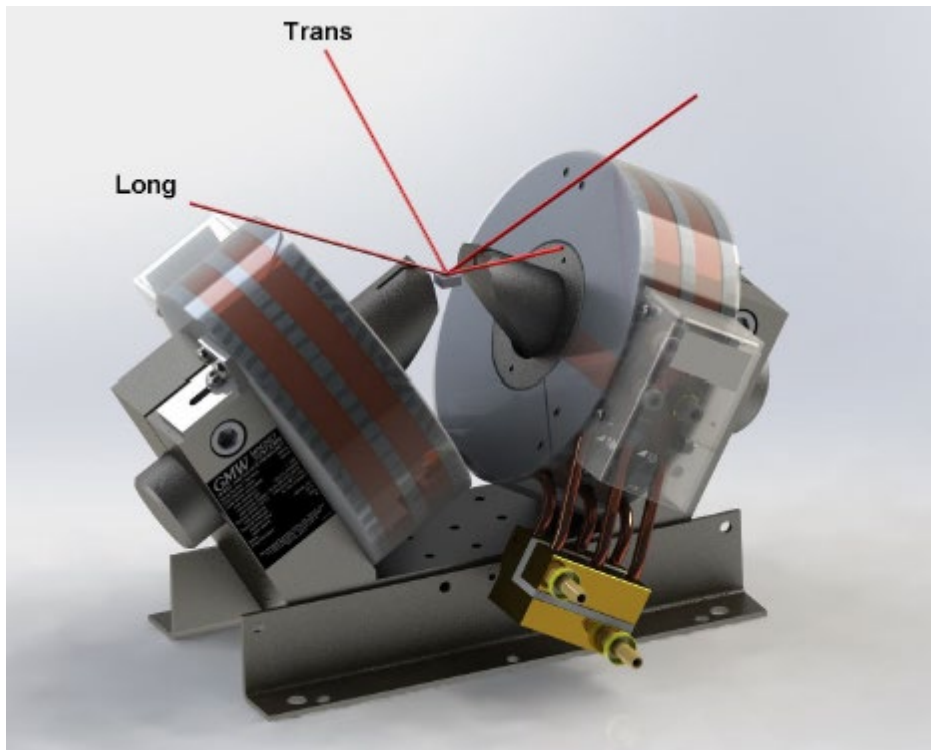

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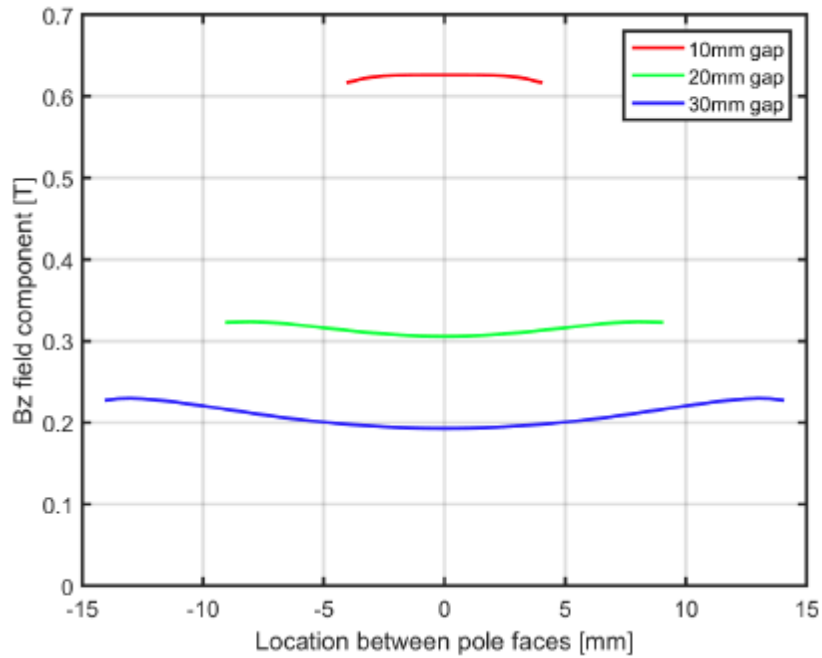
Figure 1: Current versus voltage curve for all windings connected in series. The departure from linearity is due to coil heating.

Application Note – MOKE

In transverse operation, 90° angle of incidence is possible. For longitudinal operation, angles of incidence up to 80° are achievable.

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