### 3480 OG Dipole Electromagnet

#### **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.

#### **FEATURES**

- Small and light weight at 32kg
- High angle of incidence up to 60°
- Peak continuous fields up to 1.2 T for 10mm pole gap
- Any mounting orientation
- Fast cycle times

#### **APPLICATIONS**

• MOKE especially for FORC.

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#### **MODEL 3480 OG GENERAL SPECIFICATIONS**

Dimensions	325mm W x 197mm D x 216mm H
	(12.8" w x 7.76" D x 8.5" H)
Weight (excluding hoses and water)	32 kg (70 pounds)

**Coils (series connected)** 

Resistance (20°C)	1.418	Ω
Max. Resistance (65°C)	1.666	Ω
Max. continuous current (water cooled)	35	Α
Peak Current (sinusoid)	50	Α
Peak Current (triangle wave)	60	Α
Max. continuous current (air cooled)	7	Α
Max. continuous Power	2.0	kW
Max Instantaneous Power	8.0	kW
Inductance	180	mH
Water Cooling (supply 18°C @ 15 psi)	4	Litre/min
Anticipated max. sinusoidal frequency (1T, 3dB)	10	Hz
Over Temperature Interlock	65	°C

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



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### 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.

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### **Application Note - MOKE**

In transverse operation, any angle of incidence is possible. For longitudinal operation, angles of incidence up to 60° are achievable.

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