

# 3460 Electromagnet - Preliminary



## OVERVIEW

The **3460 Dipole Electromagnet** is the smallest electromagnet that can generate 1.5T across a 10mm gap. At 10 kg, this magnet can be integrated into any application without complex mounting requirements or lifting equipment.

The 3460 has standard poles (16 or 37mm pole face) with finely adjustable pole gap from 0 to 34mm. Custom poles are also easily designed in order to provide specific field profiles.

## Features

- Small and light weight at 10kg
- Peak continuous fields up to 1.5T at 10mm gap
- Any mounting orientation
- Fast cycle times

## Applications

- Spin Orbit Torque measurements
- EPR/ESR - with High Uniformity Pole Option
- FMR – suited for maneuvering magnetic field around a static waveguide
- MOKE or VSM

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## Model 3460 General Specifications

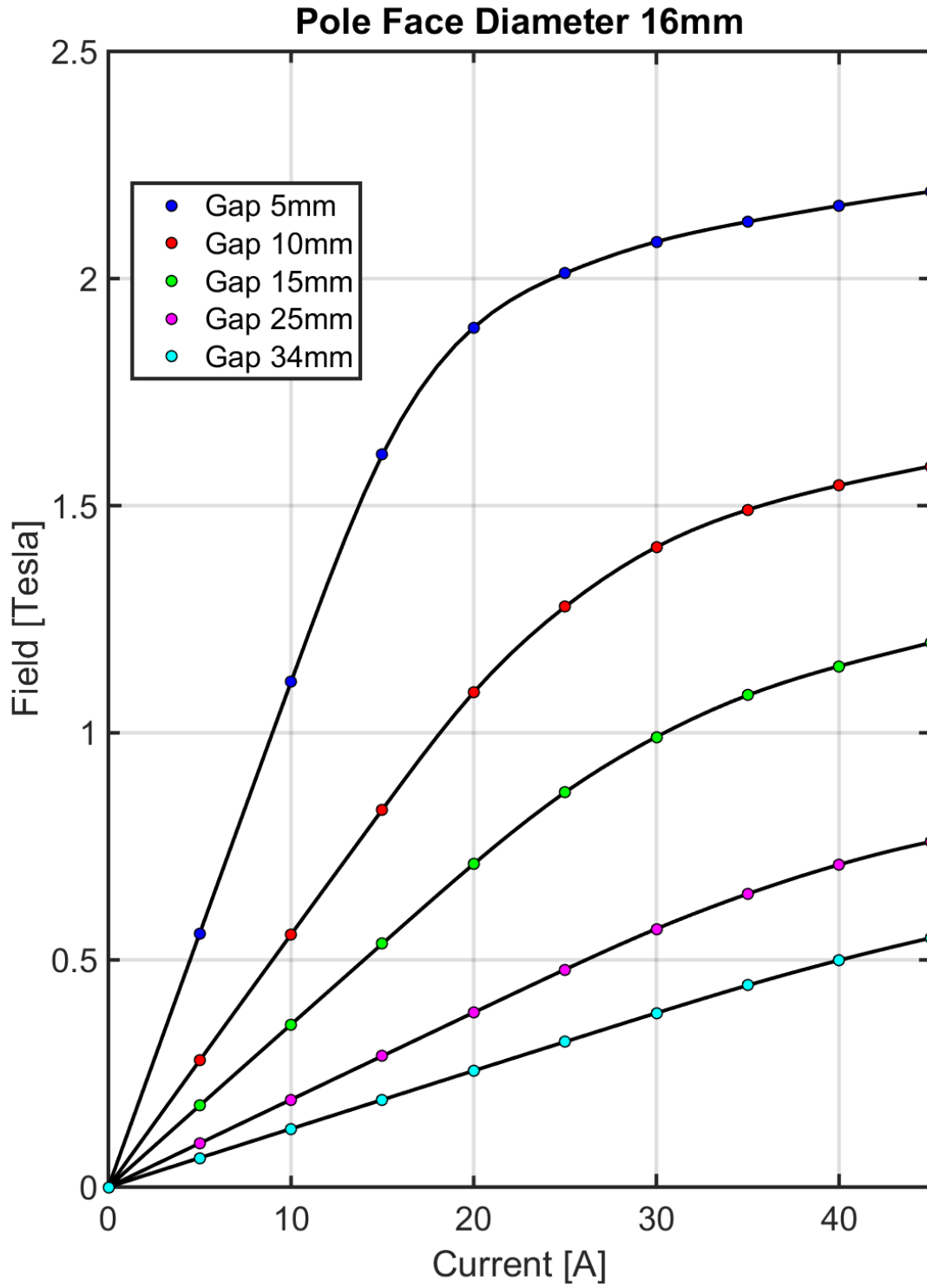
### Mechanical

Dimensions	166mm W x 120mm D x 136mm H (6.54 inch w x 4.72 inch D x 5.35 inch H)
Pole Gap, Fully Adjustable	0 to 34mm
Weight (excluding hoses and water)	9.9kg (22 pounds)
Standard Pole Face Diameters	16mm (0.63 inch), 37mm (1.46 inch)

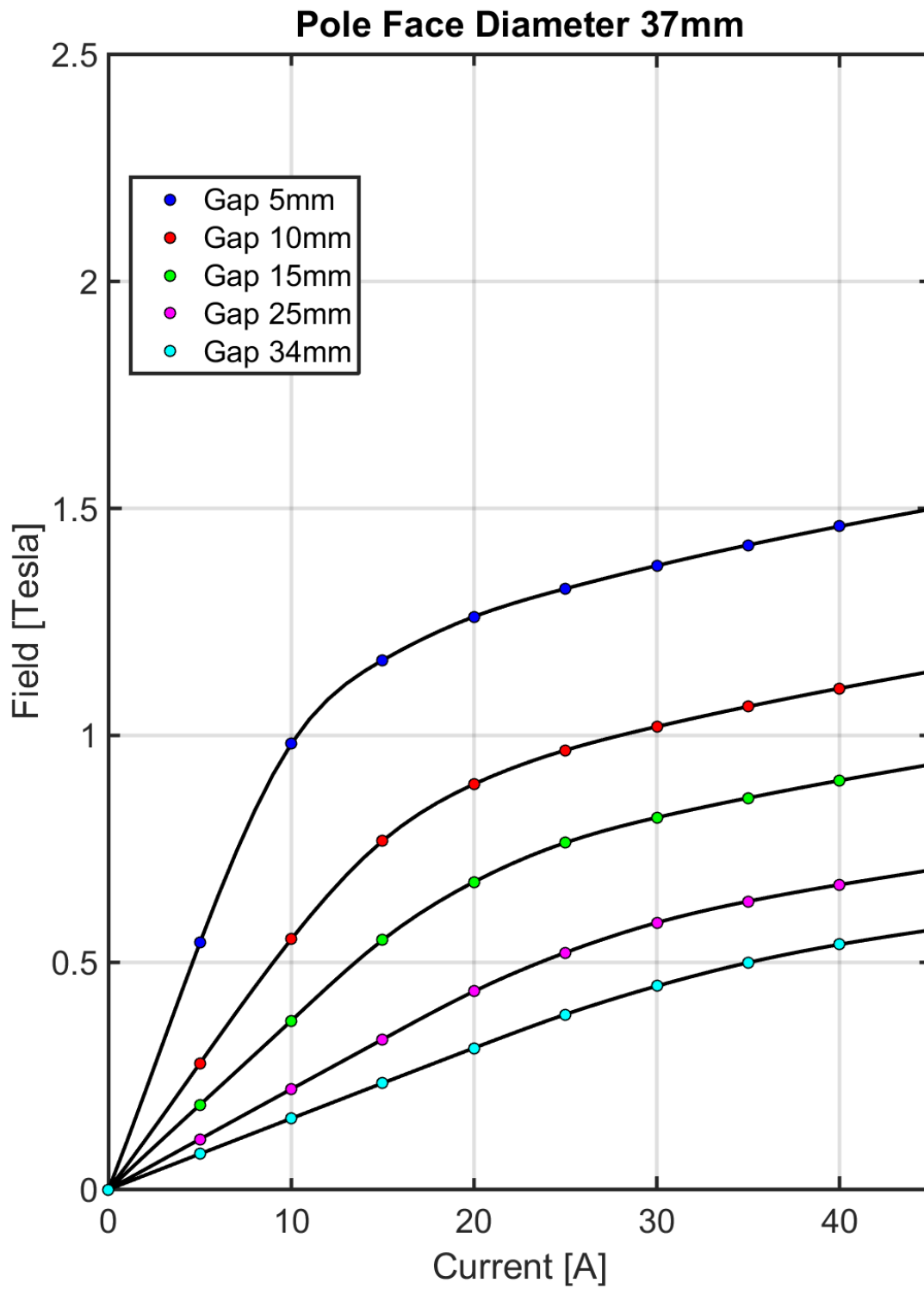
### Coils (series connected)

Resistance (20°C)	0.866Ω
Max. Resistance (65°C)	1.207Ω
Max. Continuous Current	35A
Max. Current (sinusoid)	50A
Max. Current (triangle wave)	60A
Max. Continuous Power	1.5kW
Inductance	42mH
Water Cooling (supply 18°C @ 15 psid)	minimum 2 liters/min
Anticipated max. sinusoidal frequency, 1T	10Hz
Over Temperature Lock	70°C

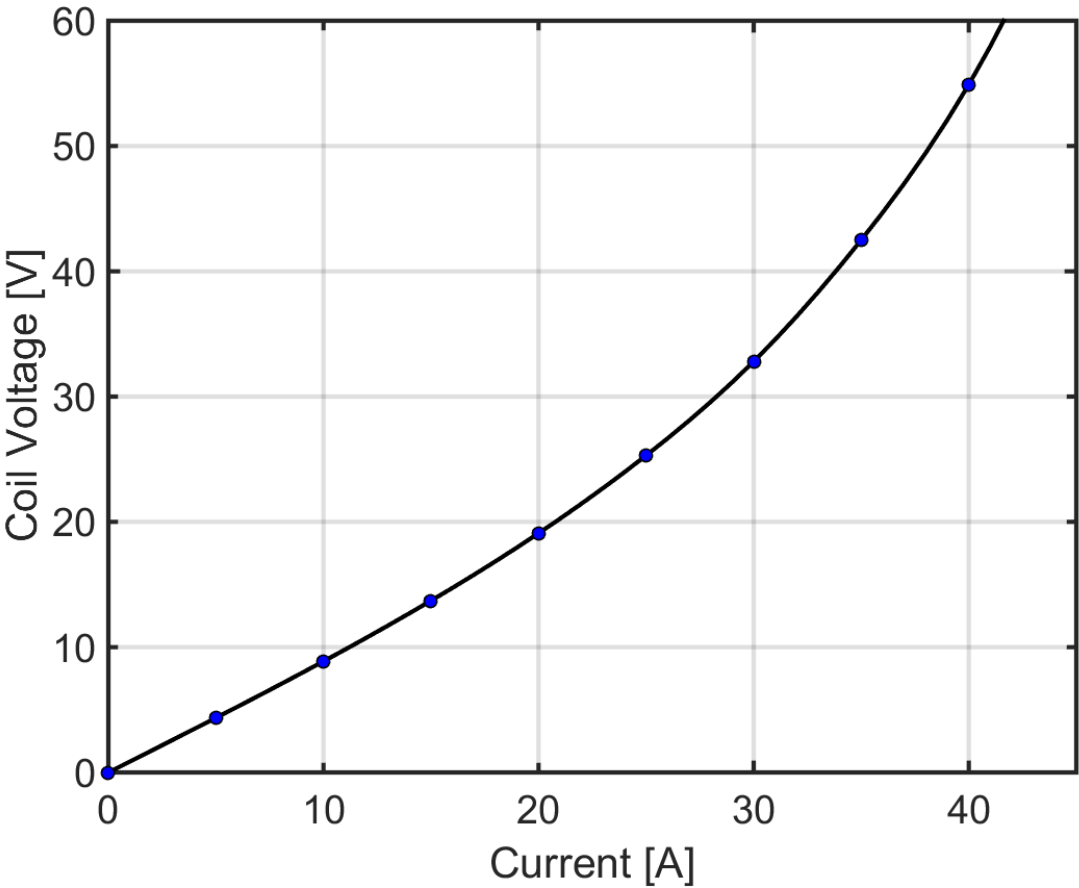
## Excitation Curves (Field vs. Current)



## Excitation Curves (Field vs. Current), Continued



# Current Vs. Voltage



## Dimensional Drawings (in mm)

