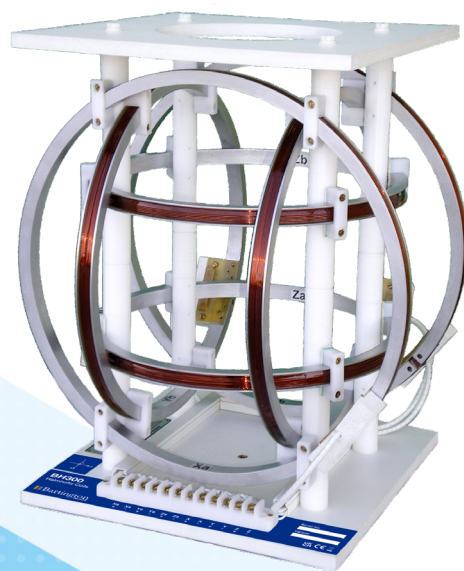
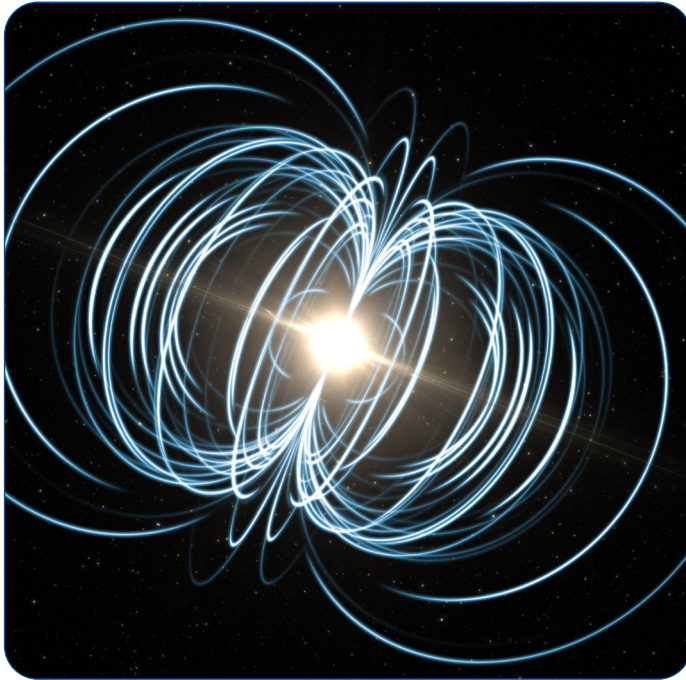


BH300-A

Helmholtz Coils





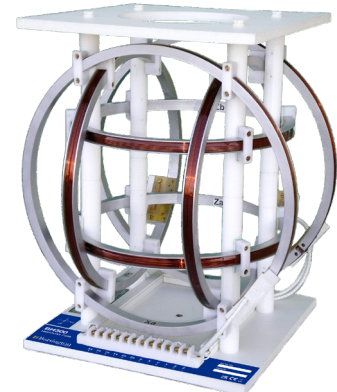
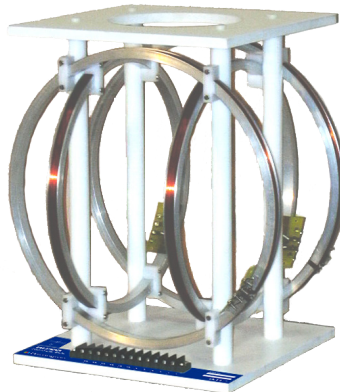
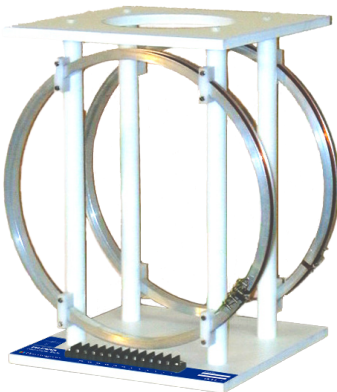
BH300-A Helmholtz Coils

A desktop-sized, lightweight, set of Helmholtz Coils for laboratory and general-purpose use.

These coils are constructed using aluminium split coil formers that can be electrically connected to also generate a low-strength magnetic field.

The coils are available in five models, each with different combinations of X, Y and Z axis configurations.

Mounting plate and sensor jigs are available.



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Features

- Option of 1, 2 or 3 axes
- Coil formers can be used as a single-turn Helmholtz coil to add additional signals on top of the main field
- Optional mounting plate and jig available

Typical Applications

- Calibration of three-axis magnetic field sensors
- Creation of a known magnetic environment



Product Identification

Product name	Variant	Axes	Description
BH300	3-A	X, Y, Z	3-axis
	2A-A	X, Z	2-axis
	2B-A	X, Y	2-axis
	1A-A	X	1-axis
	1B-A	Y	1-axis



Specifications

Performance	
Number of Axes	3, 2, or 1
Orthogonality Error	<0.2°
Maximum field (DC single axis) - continuous	1.5mT
Coil homogeneous area (<1% error)	70mm diameter sphere
Coil homogeneous area (<5% error)	100mm diameter sphere

Environmental	
Operating temperature range	+15 to +30°C
Storage temperature range	+10 to +40°C
Compliance	RoHS

Mechanical	X axis	Y axis	Z axis
Coil Effective Diameter	300mm ±1mm	236mm ±1mm	266mm ±1mm
Dimensions	364mm H x 309mm W x 276mm D		
Coil Maximum aperture	120 x 106mm		
Weight	4.5kg (for 3-axis coil set)		

Electrical	X axis	Y axis	Z axis
Field/Current Ratio (Main windings)	500µT/A ±2%		
DC resistance per axis	4.4Ω ±3%	2.8Ω ±3%	3.6Ω ±3%
Number of turns (per coil)	83	66	74
Inductance per axis	10.1mH ±5%	4.4mH ±5%	6.5mH ±5%
Field/Current Ratio (Coil Former)	7/2µT/A ±5%	7.6µT/A ±5%	6.7µT/A ±5%
Coil Maximum current - continuous	3.0 A		
Coil Connector	12-way connection strip with M4 brass terminals		

Optional Accessories	
BH300-DUTST	Mounting plate for devices under test.
Helmholtz Jig	Jig designed to fit to the BH300-DUTST for mounting Bartington Instruments sensors onto.

The specifications of the products described in this brochure are subject to change without prior notice.

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