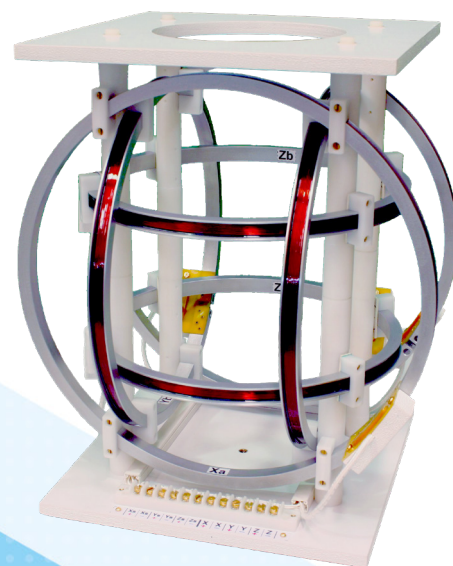


BH300HF-B

Helmholtz Coils





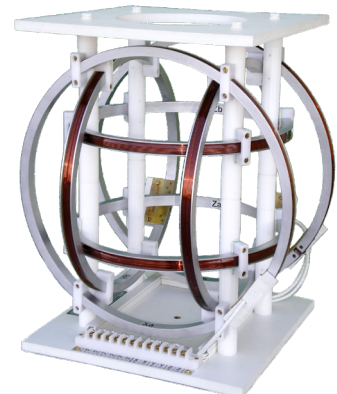
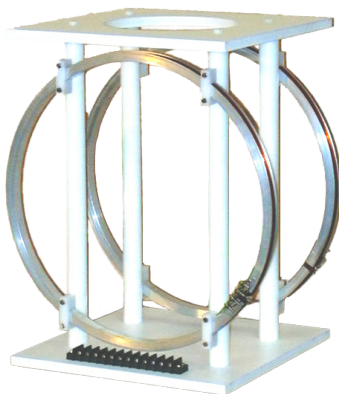
BH300HF-B Helmholtz Coils

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

Based on the design of the BH300-A, but with a reduced number of turns. This allows the coil to be driven at much higher frequencies.

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
BH300HF	3-B	X, Y, Z	3-axis
	2A-B	X, Z	2-axis
	2B-B	X, Y	2-axis
	1A-B	X	1-axis
	1B-B	Y	1-axis



Specifications

Performance	
Number of Axes	3, 2, or 1
Orthogonality Error	<0.2°
Maximum field (DC single axis) - continuous	430μT
Isolation voltage	250V
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	299mm ±1mm	236.4mm ±1mm	265.6mm ±1mm
Dimensions	365mm H x 309mm W x 276mm D		
Coil Maximum aperture	120 x 106mm		
Weight	<3kg (for 3-axis coil set)		

Electrical	X axis	Y axis	Z axis
Field/Current Ratio (Main windings)	54.1μT/A ±1%	53.1μT/A ±1%	54.2μT/A ±1%
DC resistance per axis	0.50Ω ±3%	0.32Ω ±3%	0.41Ω ±3%
Number of turns (per coil)	9	7	8
Inductance per axis	133μH ±5%	64μH ±5%	93μH ±5%
Field/Current Ratio (Coil Former)	6.0μT/A ±5%	7.6μT/A ±5%	6.9μT/A ±5%
Coil Maximum current - continuous	8.0 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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