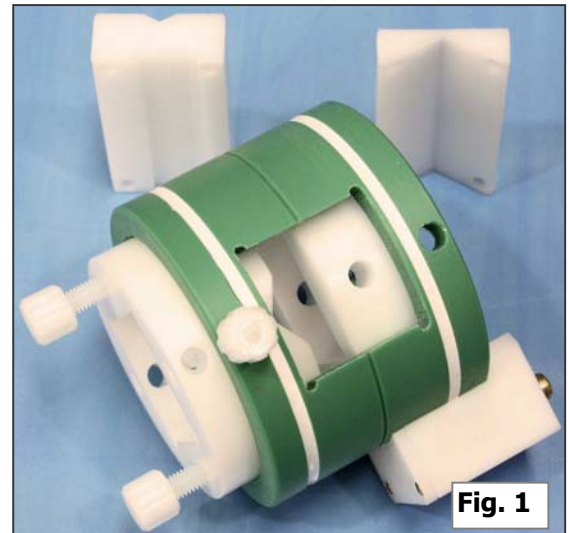


## Miniature Helmholtz coil

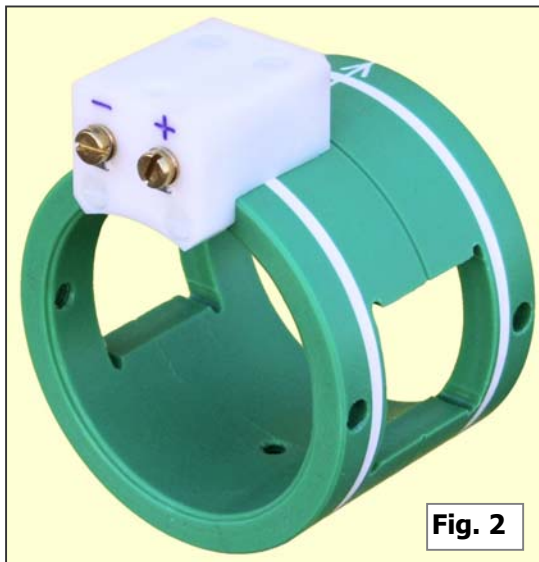
**Designed to check probes and meters at the field and the lab, it is also useful to many other purposes**

### Ferronato® - BHC-2RF

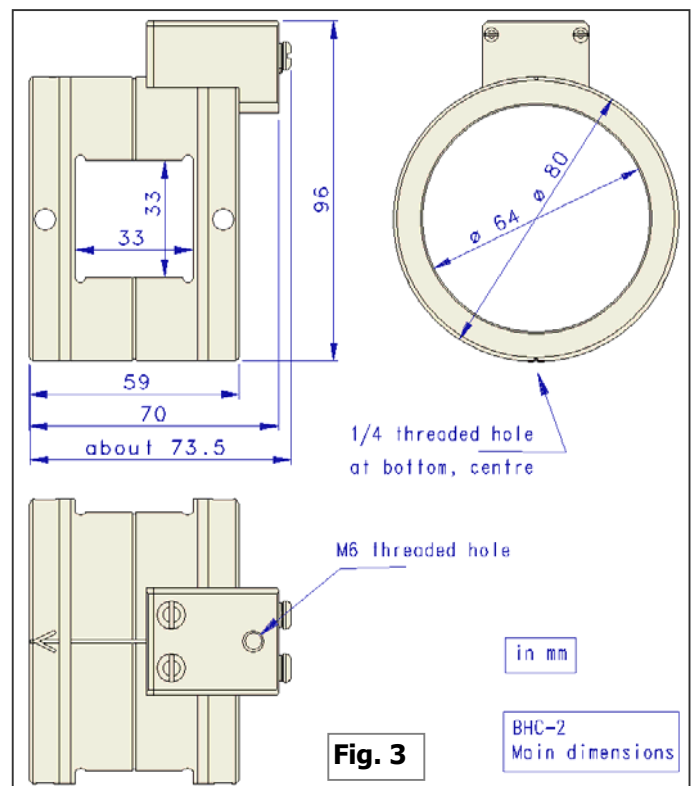
- Purposed to operate at high frequencies.
- To 420  $\mu\text{T}_{\text{rms}}$  (4  $\text{G}_{\text{rms}}$ ), in a steady way.
- There is a version for DC and low frequencies: BHC-2.
- Constructed in strong plastics: Polypropylene for the body and POM ("Delrin") for the terminal box and the Probe Kit.
- It can be supplied in two configurations:
  - a) **BHC-2RF-Kit**: As in Fig. 1. With an optional set of internal pieces to hold and keep centred a wide range of magnetic probes of one and three axes, with any of their axes aligned along the magnetic field.
  - b) **BHC-2RF**: As the photo in Fig. 2. The body with the coils and the terminal box.



**Fig. 1**



**Fig. 2**



### Specifications

Field/Current ratio	140 $\mu\text{T}/\text{A}$ (1.4 $\text{G}/\text{A}$ ) $\pm 1\%$ .
Maximum current	3 $\text{A}_{\text{rms}}$ steady way / 4 $\text{A}_{\text{rms}}$ for not longer than 10 minutes, duty cycle <50%.
Maximum field	420 $\mu\text{T}$ steady way / 560 $\mu\text{T}$ in periods < 10 minutes, duty cycle <50%.
DC resistance, at 20 °C	0.140 $\Omega$ $\pm 3\%$ .
Inductance, at 120 kHz	14.5 $\mu\text{H}$ $\pm 2\%$ .
Resistance/120 kHz/20 °C	0.322 $\Omega$ $\pm 3\%$ .
Self resonance frequency	9.5 MHz $\pm 3\%$ .
Field homogeneity	$\pm 0.1\%$ in a cylindrical volume of 14.5 mm in diameter x 14.5 mm in length.
<i>Percentages are respect to the centre.</i>	$\pm 1\%$ in a cylindrical volume of 22.5 mm in diameter x 22.5 mm in length. $\pm 5\%$ in a cylindrical volume of 33.5 mm in diameter x 33.5 mm in length.
Connector	Two M4 brass screws.
Fixing holes	A 1/4" threaded hole (as for tripod) at the bottom. A M6 threaded hole on top.
Body dimensions	Ext. diameter: 80 mm; Int. diameter: 64 mm; Length: 59 mm. See Fig. 3.
Weight	112 grams, just the coils as in Fig. 2, without the probe holding kit.

- These specifications are subject to minor specifications in future -

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